

Arizona State Retirement System

Fixed Income Asset Class Review

October 15, 2010

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NEPC, LLC

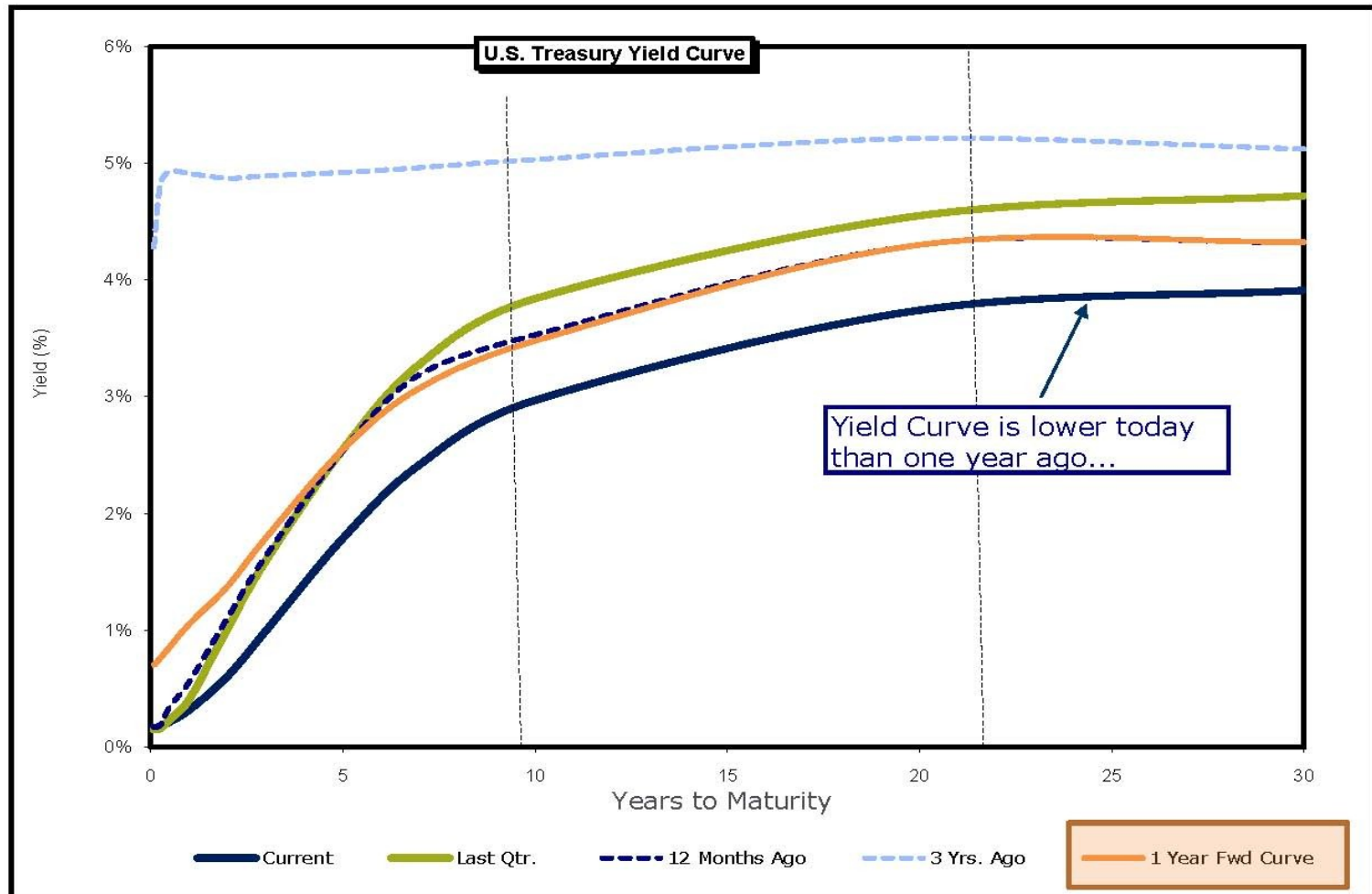
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Fixed Income Market Environment

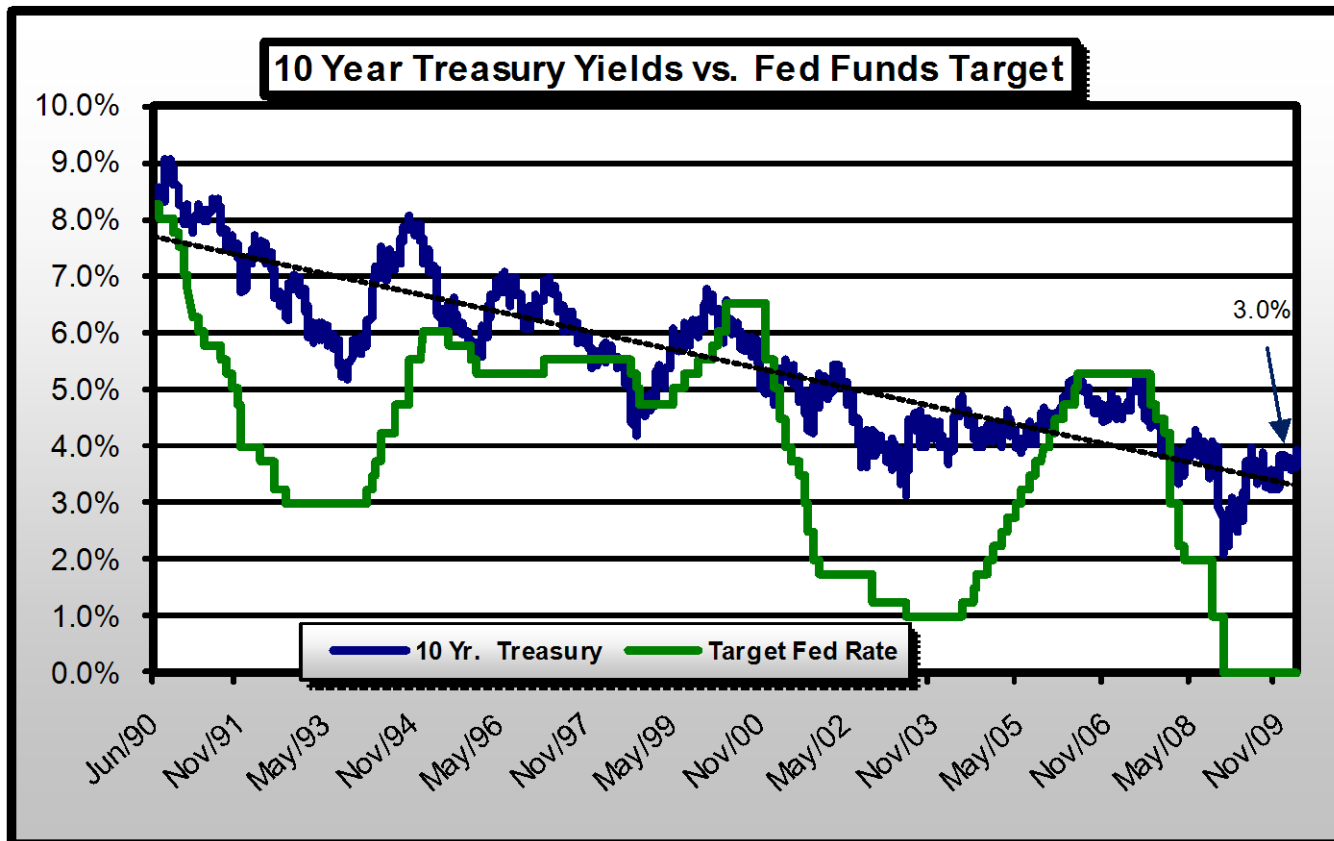
Note: All of the data in this report is as of June 30, 2010, unless otherwise noted.

U.S. Treasury Yield Curve



Source: U.S. Federal Reserve; Bloomberg.

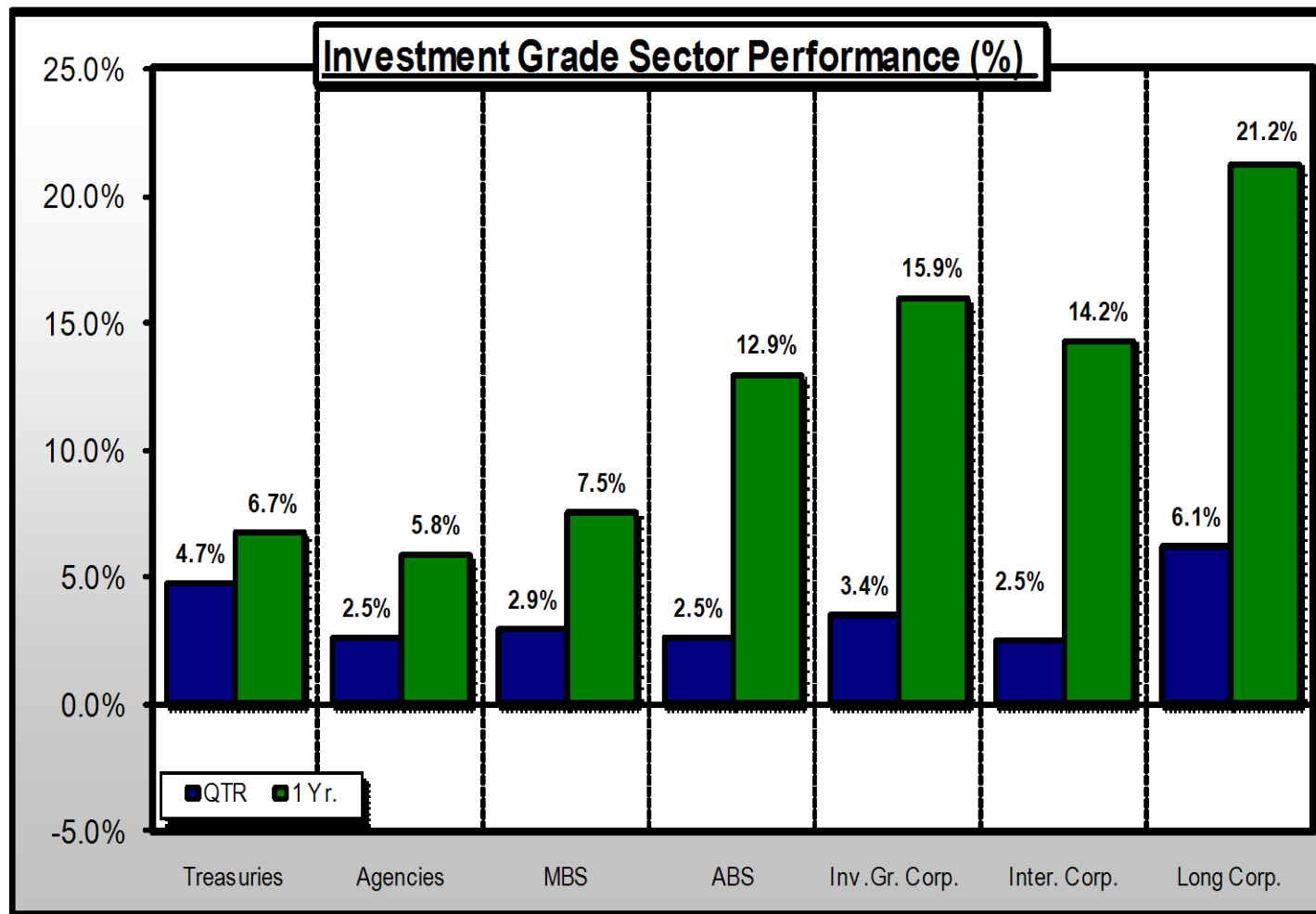
10-Year Treasury Yields



Fed Funds rate target is still between 0% and 0.25%, while the 10-year Treasury yield decreased to 3.0% in Q2.

Source: U.S. Federal Reserve.

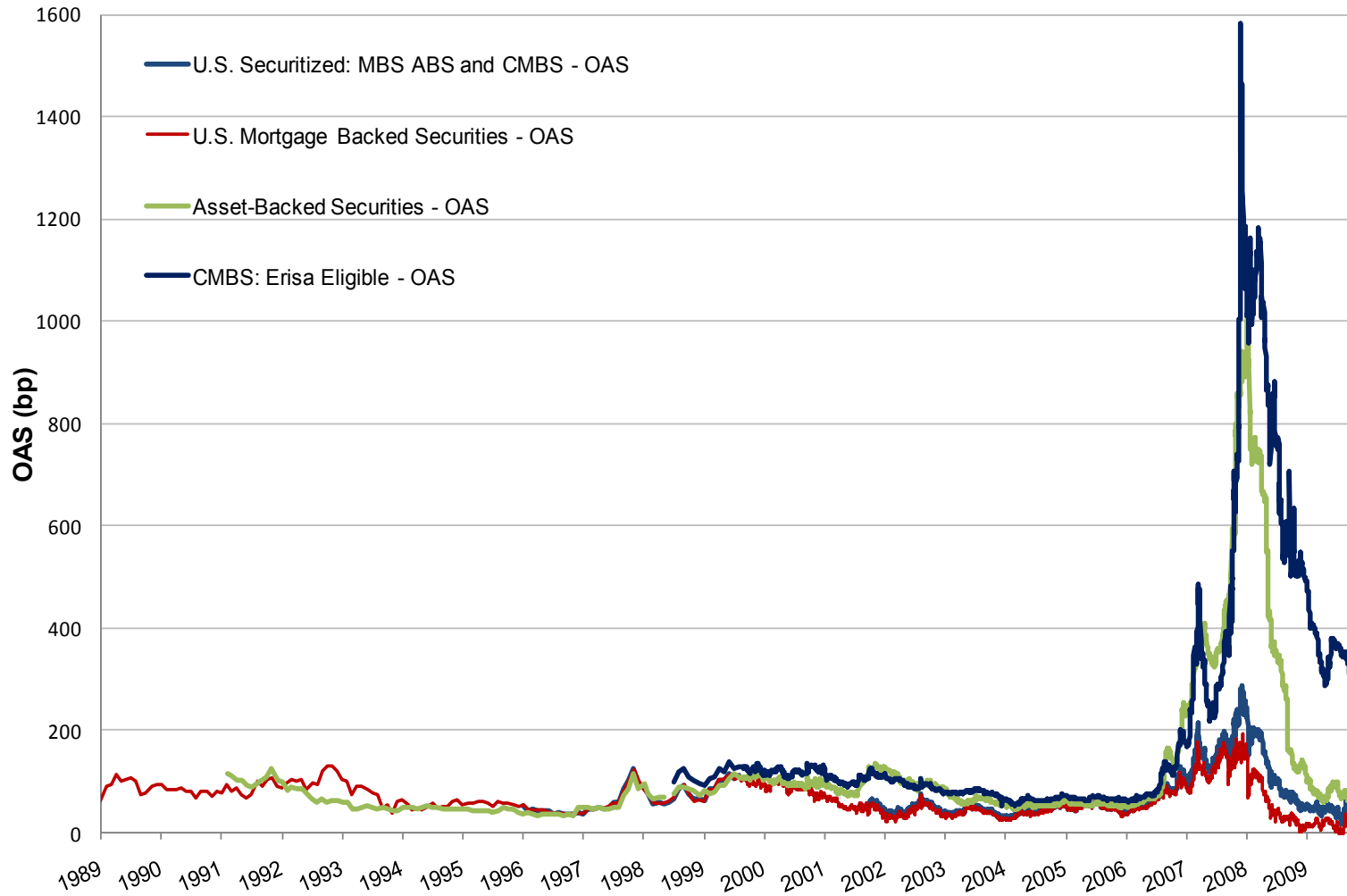
Investment Grade Sector Performance



Source: Barclays Capital U.S. Aggregate Bond Index Sector Performance as provided by PIMCO.

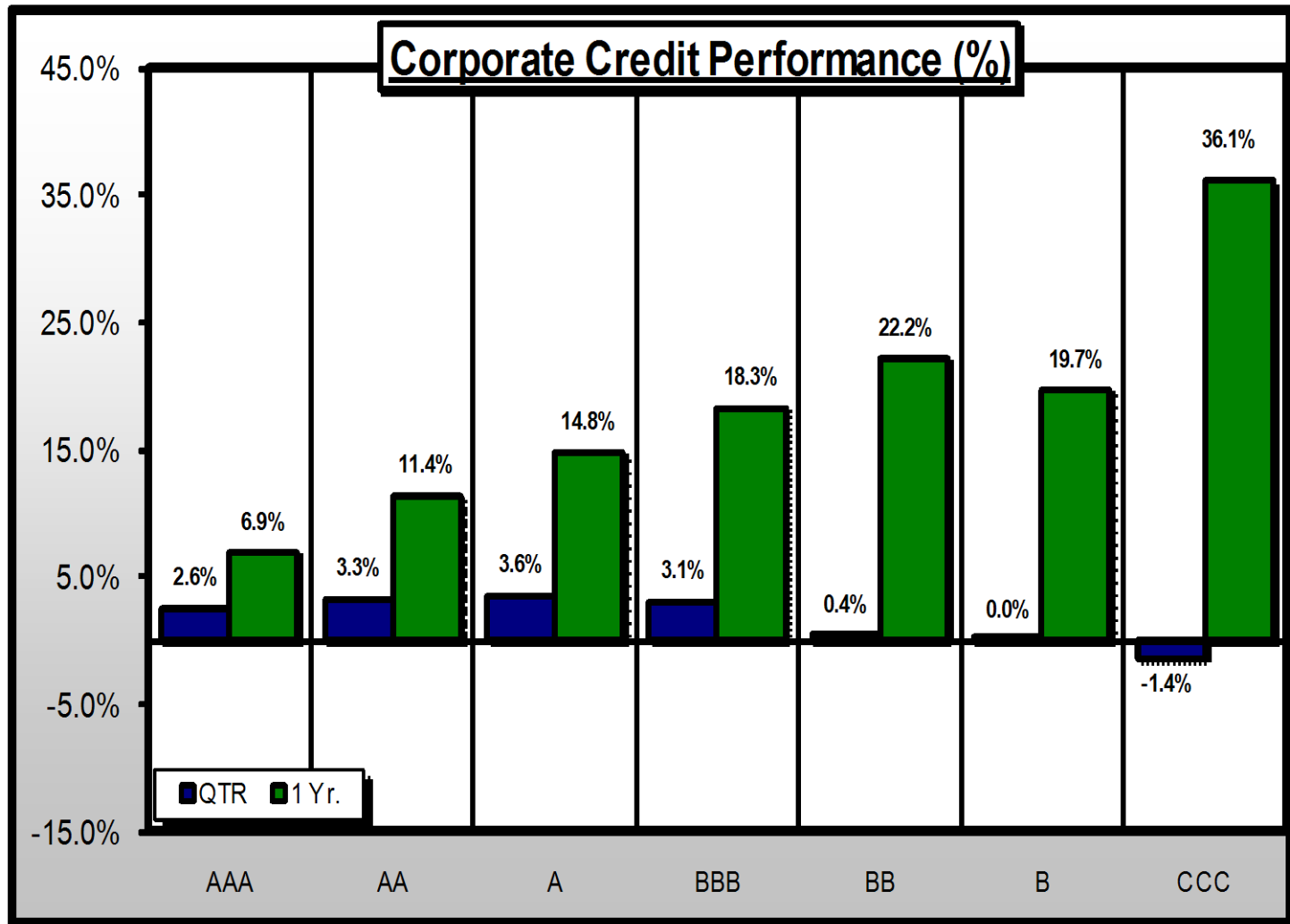
Securitized Spreads

Barclays Capital US Aggregate Index - Securitized Sector Spreads



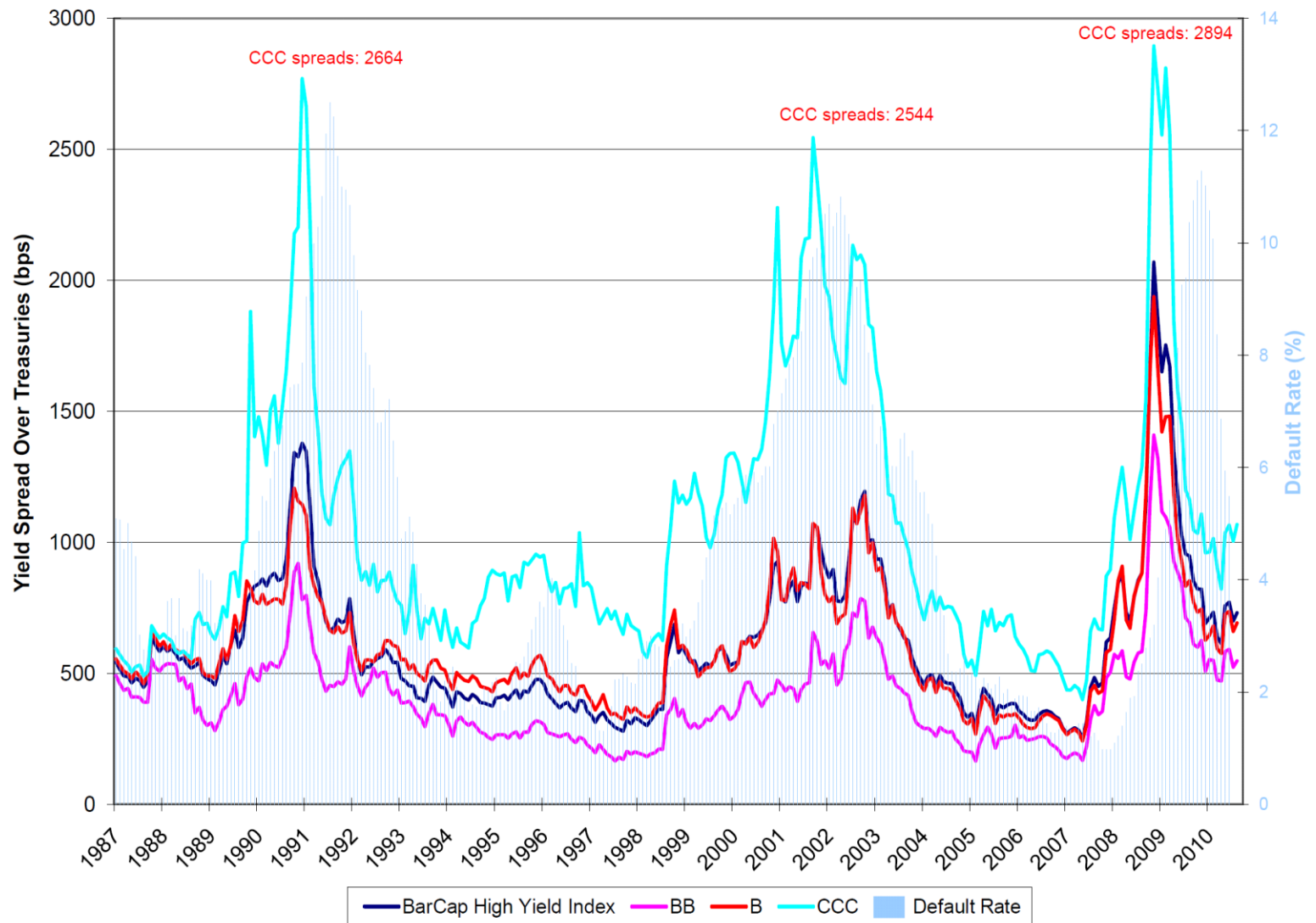
Source: Barclays Capital U.S. Aggregate Bond Index, Income Research & Management

Corporate Credit Performance



Source: Barclays Capital U.S. Corporate and U.S. High Yield Index Performance by credit quality as provided by PIMCO.

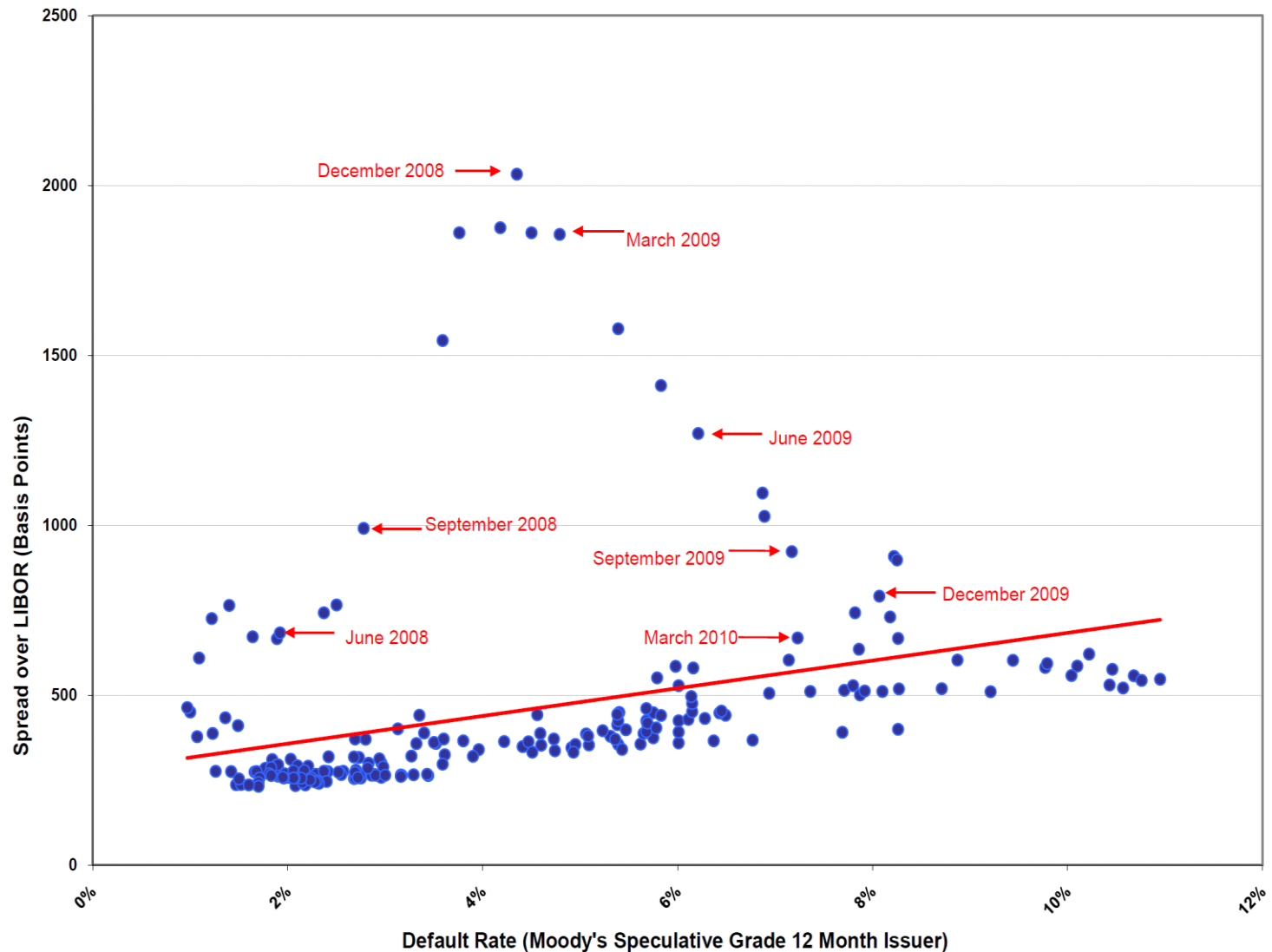
High Yield Credit Spreads



Source: Barclays Capital U.S. High Yield Index, Loomis Sayles

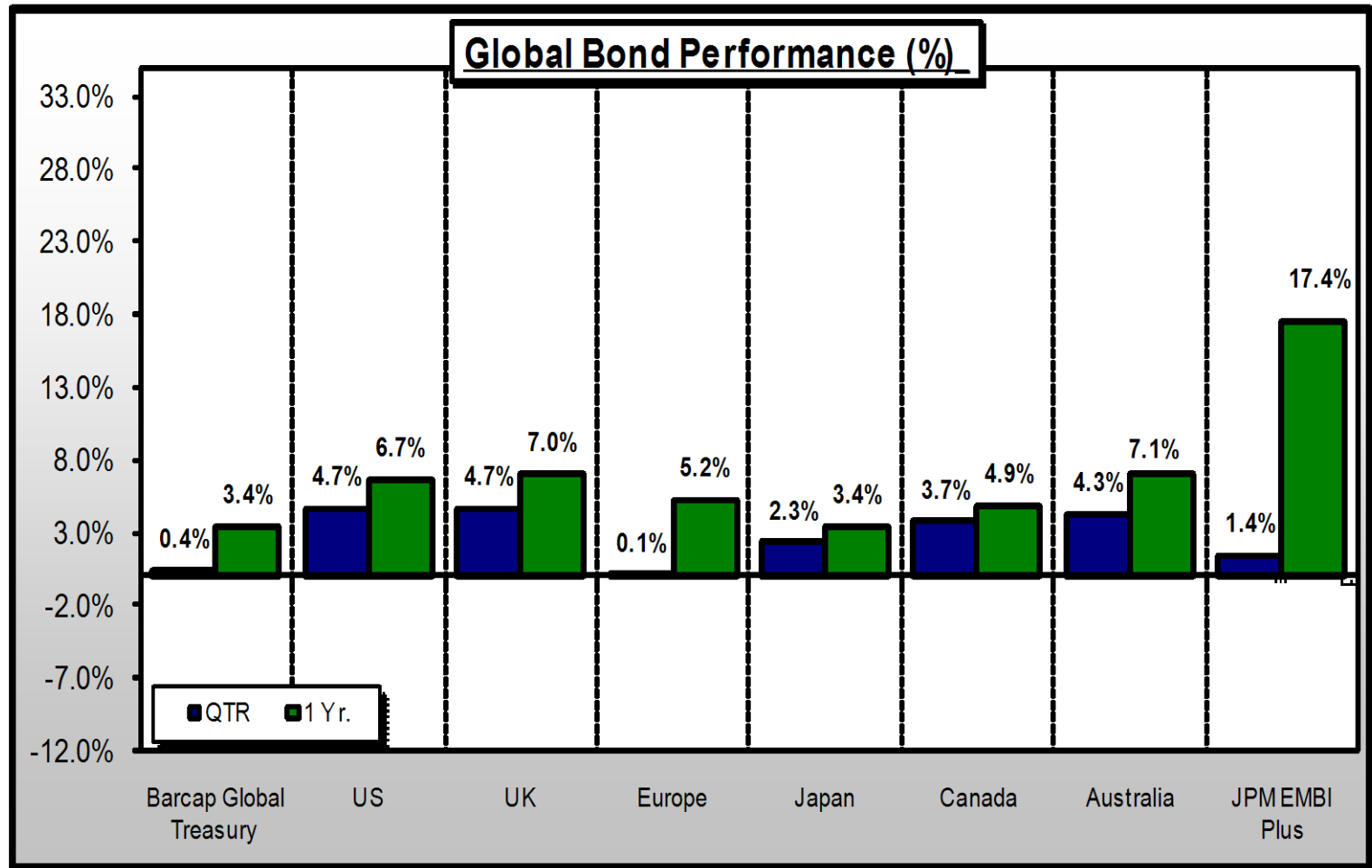
Bank Loan Spreads Back to Pre-Crisis Levels

Data as of March 31, 2010



Source: Credit Suisse Leveraged Loan Index, Loomis Sayles

Global Bond Performance



Source: Barclays Capital and JP Morgan.

Sovereign Credit Risk Increasing in the G13

	5-Year Sovereign CDS Spreads (bps)	Notches above speculative grade	Rating Actions Since 6/30/2007	Rating Agency Outlook	Gross Government Debt as a Percent of 2010 GDP
Australia	38	9	None	Stable	19.8
Austria	58	10	None	Stable	70.7
Belgium	58	9	None	Stable	100.1
Canada	NA	10	None	Stable	82.3
Denmark	34	10	None	Stable	51.2
Finland	25	10	None	Stable	49.9
France	50	10	None	Stable	84.2
Germany	33	10	None	Stable	76.7
Greece	427	0	9 Down	Negative	124.1
Iceland	412	0	11 Down	Negative	119.9
Ireland	155	8	5 Down	Negative	78.8
Italy	125	7	None	Stable	118.6
Japan	66	8	None	Negative	227.3
Korea	82	5	None	Stable	33.3
Netherlands	34	10	None	Stable	64.2
New Zealand	46	9	None	Negative	31.3
Norway	19	10	None	Stable	53.6
Portugal	160	7	2 Down	Negative	85.9
Spain	130	9	1 Down	Negative	66.9
Sweden	35	10	None	Stable	43.1
Switzerland	45	10	None	Stable	39.8
United Kingdom	77	10	None	Negative	78.2
United States	42	10	None	Stable	92.6

Source: International Monetary Fund's April 2010 Global Financial Stability Report; Bank for International Settlement; Bloomberg

Some Spread Sectors Continue to Outperform Treasuries in 2010

Barclays Capital Fixed Income Indices relative to Treasuries (excess return) 1998-2010

	Agencies	MBS	ABS	CMBS Inv. Grade	U.S. Credit	Intermediate Credit	Long Credit	U.S. High Yield	EMD
Quality Ranking	High	High	High	High	Medium	Medium	Medium	Low	Low
1998	-49	-90	-88	n/a	-238	-150	-381	-843	-2046
1999	41	113	137	87	170	164	182	476	2417
2000	-13	-77	43	-41	-463	-237	-1003	-1897	148
2001	73	-75	139	131	277	138	667	-285	-541
2002	96	173	-16	210	-187	-129	-371	-1329	23
2003	27	11	181	201	527	439	824	2642	2465
2004	78	142	142	118	159	151	190	800	823
2005	13	-37	32	15	-85	-25	-291	47	959
2006	75	122	87	137	119	107	156	843	702
2007	-52	-185	-634	-435	-464	-399	-655	-777	-457
2008	-110	-255	-2223	-3274	-1786	-1504	-2719	-3832	-2842
2009	238	482	2496	2960	1990	1707	2880	5955	3797
YTD 2010	46	75	128	750	-109	-20	-386	-40	-213

Source: Barclays Capital via JP Morgan Asset Management

YTD 2010 as of June 30, 2010

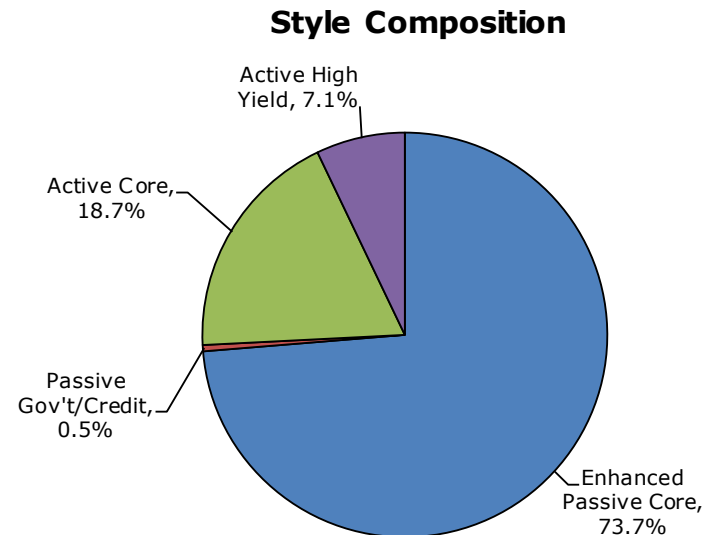
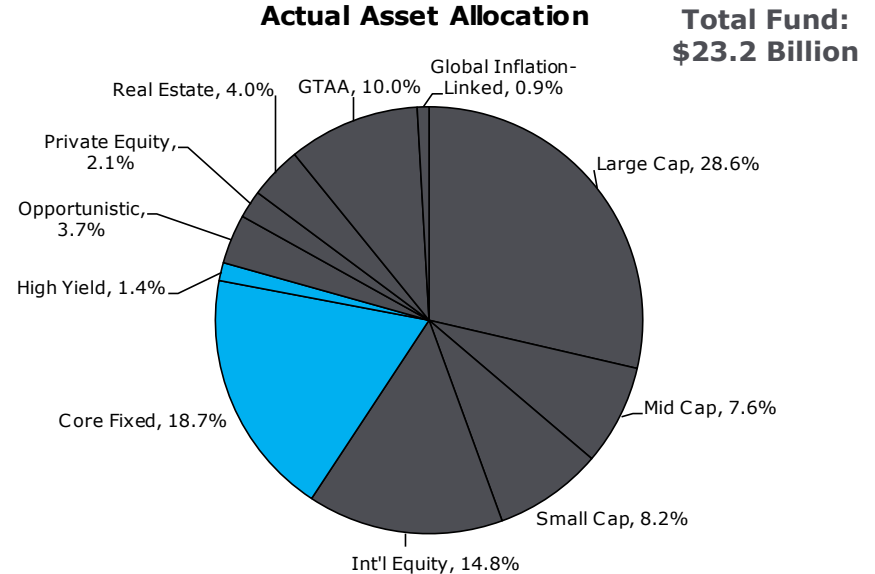
The table above is shown for illustrative purposes only.

Fixed Income Asset Class Review (Aggregate)

Note: All of the data in this report is as of June 30, 2010, unless otherwise noted.

ASRS Fixed Income Asset Class Overview

- **Market Value: \$4.5 B**
- **Passive Allocation: 74.2%**
- **Portfolios:**
 - 2 Enhanced Passive
 - 1 Passive
 - 4 Active
 - 2 Core
 - 2 High Yield
- **Average Fees: 8 bps**



Note: Domestic Equity, International Equity and Fixed Income allocations exclude GTAA portfolios.

ASRS Fixed Income Asset Class Mandates

Manager	Style	Benchmark	Inception Date	Expected Alpha (bps)	Portfolio Assets (\$MM)	Strategy Assets (\$MM)
Active						
Segall Bryant & Hamill	Core	BC Aggregate	12/31/2009	75	\$208.7	\$1,600.0
PIMCO	Core	BC Aggregate	01/31/2010	75	\$632.5	\$33,690.6
Columbia ¹	High Yield	BC High Yield	09/30/2009	150	\$158.6	\$8,522.6
Shenkman	High Yield	BC High Yield	9/30/2009	100	\$160.0	\$9,800.0
Passive/Enhanced Passive						
BlackRock (Enhanced Passive)	Core	BC Aggregate	9/30/2004	10	\$414.7	\$41,975.0
Internally Mgd F2 (Enhanced Passive)	Core	BC Aggregate	9/30/2000	10	\$2,895.7	N/A
BlackRock (Passive) ²	Gov't/ Credit	BC Intermediate Gov't/Credit	12/31/2008	10	\$21.0	\$856.0

¹On April 30, 2010, Ameriprise Financial, Inc., the parent company of RiverSource Investments, LLC, acquired the long term asset management business of Columbia Management Group, LLC, including certain of its affiliates, which were, prior to this acquisition, part of Bank of America. In connection with the acquisition of the long term assets, certain clients of Columbia Management Advisors, LLC have a new investment advisor, RiverSource Investments, LLC, which is now known as Columbia Management Investment Advisors, LLC. As a result of this acquisition, the asset management business of the two firms were integrated under the Columbia Management name.

²System only

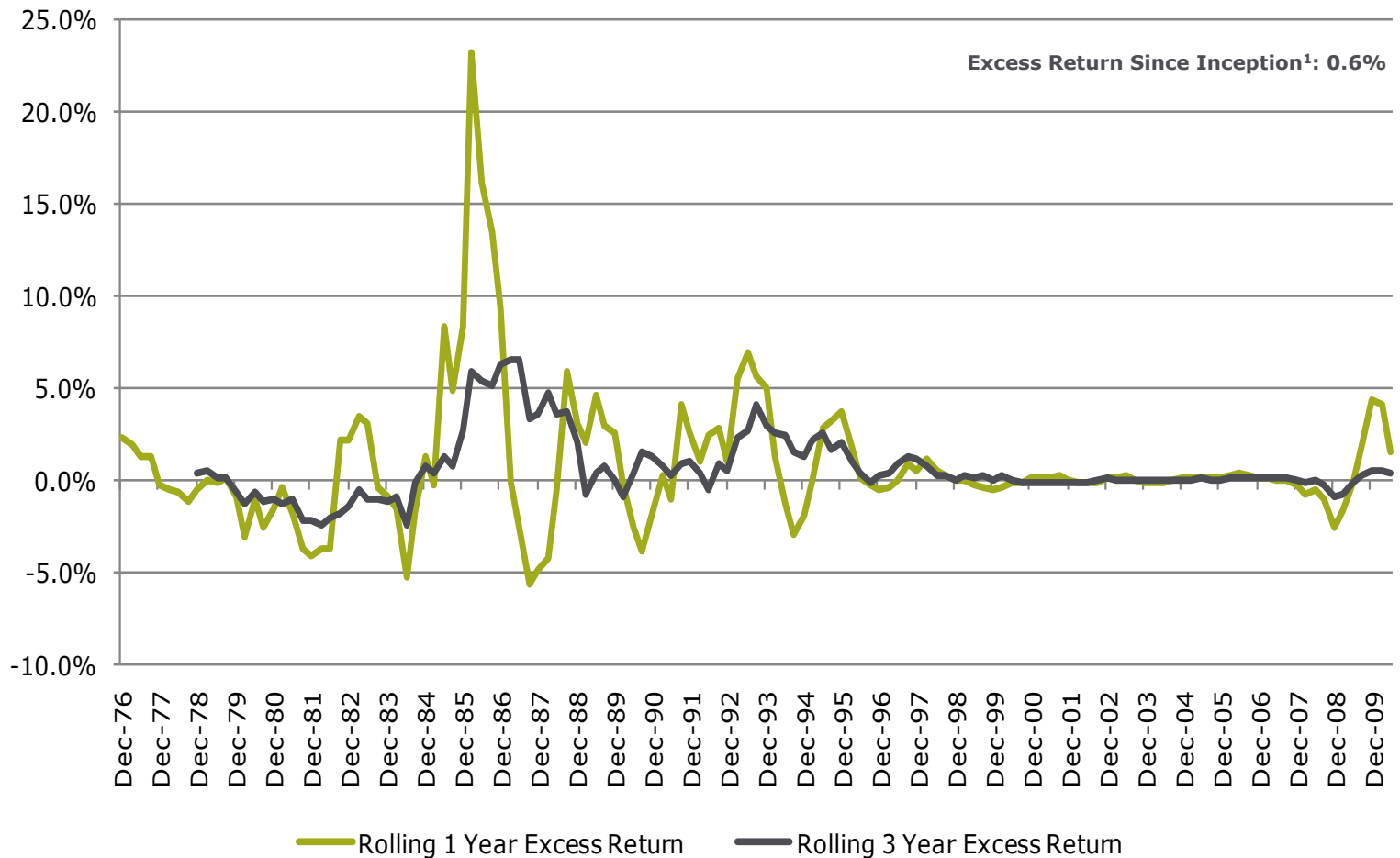
ASRS Fixed Income Manager Summary

Manager Name	Assets Under Management (\$MIL)	% Fixed Income
Active Investment Grade Fixed Income		
Segall Bryant & Hamill (Core)	\$208.7	4.6%
PIMCO (Core)	\$632.5	14.1%
Total Active Investment Grade Fixed Income	\$841.2	18.7%
Enhanced Passive/Passive Investment Grade Fixed Income		
BlackRock Enhanced US Debt (Enhanced Passive)(Core)	\$414.7	9.2%
Internally Managed F2 (Enhanced Passive)(Core)	\$2,895.7	64.5%
BlackRock Intermediate Gov't/Credit (Passive)(Gov't/Credit) ¹	\$21.0	0.5%
Total Enhanced Passive/Passive Investment Grade Fixed Income	\$3,331.4	74.2%
Total Investment Grade Fixed Income	\$4,172.6	92.9%
Active Below Investment Grade Fixed Income		
Columbia (High Yield)	\$158.6	3.5%
Shenkman (High Yield)	\$160.0	3.6%
Total Below Investment Grade Fixed Income	\$318.6	7.1%
Total Fixed Income	\$4,491.2	100%

¹System only

ASRS Fixed Income Rolling Excess Returns

ASRS Combined Fixed Income vs. Barclays Capital U.S. Aggregate
Excess Returns Since Inception¹ (December 1975) – June 30, 2010

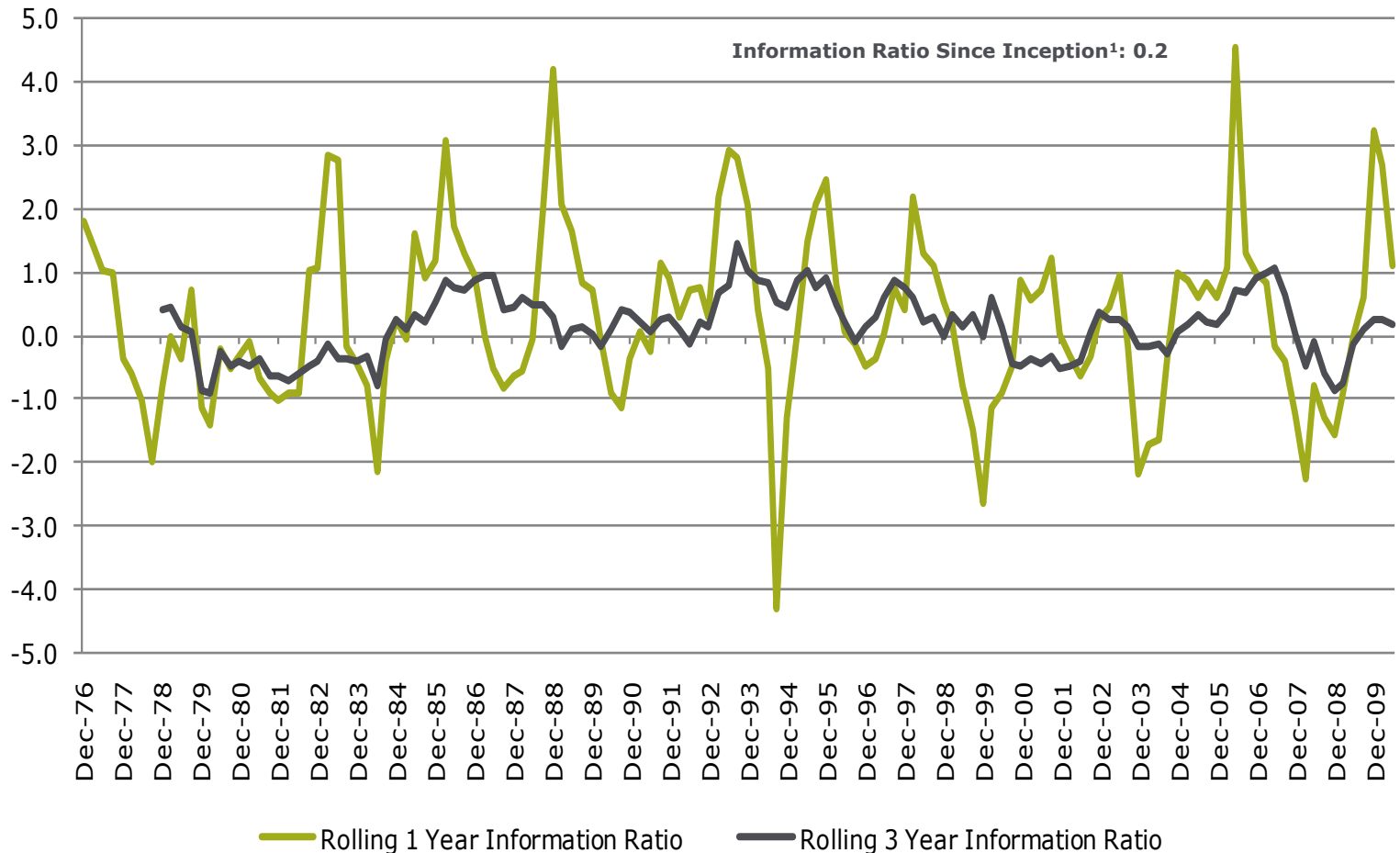


¹Inception date of the ASRS Fixed Income Composite is June 30, 1975. Performance shown since December 31, 1975 because the Barclays Capital U.S. Aggregate Bond Index began reporting performance January 1, 1976.

Note: Based on quarterly, net of fee performance data, since inception.

ASRS Fixed Income Rolling Information Ratios

ASRS Combined Fixed Income vs. Barclays Capital U.S. Aggregate Information Ratios Since Inception¹ (December 1975) – June 30, 2010



¹Inception date of the ASRS Fixed Income Composite is June 30, 1975. Performance shown since December 31, 1975 because the Barclays Capital U.S. Aggregate Bond Index began reporting performance January 1, 1976.

Note: Based on quarterly, net of fee performance data, since inception.

ASRS Fixed Income Performance

	Ending Market Value	Last Quarter	Rank	Year to-Date	Rank	One Year	Rank	Annualized Returns								Inception Date
								Three Years	Rank	Five Years	Rank	Ten Years	Rank	Since Inception		
TOTAL FIXED INCOME	\$4,491,186,221	3.0%	35	4.9%	56	11.0%	71	7.9%	42	5.8%	55	6.6%	55	9.0%	Jun-75	
Barclays Capital U.S. Aggregate		3.5%		5.3%		9.5%		7.5%		5.5%		6.5%		--		
Performance Variance (Return - Benchmark)		-0.5%		-0.4%		1.5%		0.3%		0.3%		0.1%		--		
ICC Fixed Income Funds Median		2.7%		5.1%		12.9%		7.6%		6.0%		6.7%		--		
ACTIVE CORE FIXED INCOME																
Segall Bryant & Hamill	\$208,653,082	3.6%	21	5.1%	63	n/a		n/a		n/a		n/a		5.1%	Dec-09	
Barclays Capital U.S. Aggregate		3.5%		5.3%		9.5%		7.5%		5.5%		6.5%		5.3%		
Performance Variance (Return - Benchmark)		0.1%		-0.2%		n/a		n/a		n/a		n/a		-0.2%		
PIMCO	\$632,449,410	3.4%	32	n/a		n/a		n/a		n/a		n/a		4.2%	Jan-10	
Barclays Capital U.S. Aggregate		3.5%		5.3%		9.5%		7.5%		5.5%		6.5%		3.7%		
Performance Variance (Return - Benchmark)		0.0%		n/a		n/a		n/a		n/a		n/a		0.4%		
ICC Core Fixed Income Funds Median		3.2%		5.5%		12.1%		8.1%		6.1%		6.8%		--		
ENHANCED PASSIVE CORE FIXED INCOME																
BlackRock Enhanced U.S. Debt Index	\$414,691,685	2.8%	71	4.9%	67	14.4%	20	10.2%	9	7.1%	14	n/a		6.7%	Sep-04	
Barclays Capital U.S. Aggregate		3.5%		5.3%		9.5%		7.5%		5.5%		6.5%		5.4%		
Performance Variance (Return - Benchmark)		-0.7%		-0.4%		4.9%		2.7%		1.6%		n/a		1.3%		
Internally Managed F2	\$2,895,733,452	3.3%	47	5.2%	63	10.0%	76	7.9%	60	5.8%	63	n/a		6.4%	Sep-00	
Barclays Capital U.S. Aggregate		3.5%		5.3%		9.5%		7.5%		5.5%		6.5%		6.3%		
Performance Variance (Return - Benchmark)		-0.2%		-0.1%		0.5%		0.4%		0.3%		n/a		0.1%		
ICC Core Fixed Income Funds Median		3.2%		5.5%		12.1%		8.1%		6.1%		6.8%		--		
PASSIVE INTERMEDIATE GOV'T/CREDIT FIXED INCOME																
BlackRock Intermediate Gov't/Credit Bond Index ¹	\$21,048,321	3.0%	20	4.6%	23	8.3%	33	n/a		n/a		n/a		6.6%	Jan-09	
Barclays Capital U.S. Intermediate Gov't/Credit		3.0%		4.6%		8.3%		7.0%		5.3%		6.1%		6.6%		
Performance Variance (Return - Benchmark)		0.0%		0.0%		0.0%		n/a		n/a		n/a		0.0%		
ICC Intermediate Fixed Income Funds Median		1.9%		3.1%		6.5%		6.4%		5.2%		5.6%		--		
ACTIVE HIGH YIELD FIXED INCOME																
Columbia	\$158,569,833	-0.4%	80	3.1%	92	n/a		n/a		n/a		n/a		7.7%	Sep-09	
Barclays Capital U.S. High Yield		-0.1%		4.5%		26.8%		6.5%		7.2%		7.3%		11.0%		
Performance Variance (Return - Benchmark)		-0.3%		-1.4%		n/a		n/a		n/a		n/a		-3.3%		
Shenkman	\$160,040,019	0.1%	57	3.5%	78	n/a		n/a		n/a		n/a		8.3%	Sep-09	
Barclays Capital U.S. High Yield		-0.1%		4.5%		26.8%		6.5%		7.2%		7.3%		11.0%		
Performance Variance (Return - Benchmark)		0.2%		-1.0%		n/a		n/a		n/a		n/a		-2.7%		
ICC High Yield Fixed Income Funds Median		0.3%		4.3%		21.6%		6.0%		6.8%		7.5%		--		

¹System only

Note: Total Fixed Income composite and individual manager performance is reported net of fees. Ranks and ICC medians are based on gross of fees performance data.

Manager Assessment (NEPC)

Manager	Strategy	Conviction Level	NEPC Focused Placement List Strategy
Segall Bryant	Active Core	Mild	No
PIMCO	Active Core	High	Yes
Columbia	Active High Yield	High	Yes ¹
Shenkman	Active High Yield	Mild	No
BlackRock	Enhanced Passive Core	Mild	No
BlackRock ²	Passive Government/Credit	Mild	No

“High Conviction Level” strategies denote NEPC’s belief that the manager has above average prospects of generating alpha going forward.

“Mild Conviction Level” strategies denote NEPC’s belief that the manager has average prospects of generating alpha going forward.

“Low Conviction Level” strategies denote NEPC’s belief that the manager has below average prospects of generating alpha going forward.

NEPC’s Focused Placement List represents internally vetted managers and strategies we put forward to clients who are conducting a search. Criteria for inclusion vary per asset class.

¹RiverSource Investments, LLC Institutional High Yield Fixed Income strategy is on NEPC’s Focused Placement List for U.S. High Yield Fixed Income strategies. Since the merger between Columbia Management Advisors, LLC and RiverSource on April 30, 2010, RiverSource’s High Yield strategy has been placed on “Hold” status pending the completion of the acquisition and a follow up visit to evaluate and discuss the new organization’s structure and any impact on the strategy.

²System only

Takeaways and Other Discussion Topics

- **The ASRS Fixed Income Portfolio has added 0.6% of alpha since inception (December 1975)¹.**
 - The portfolio has added 230 bps of volatility relative to the Barclays Capital U.S. Aggregate Bond Index over this time period.
 - For the one-year period, the portfolio has added 1.5% of alpha, and ranks in the 71st percentile of ICC Fixed Income Funds. The portfolio ranks below median despite strong performance on an absolute basis, which can be partially attributed to the smaller amount of below investment grade investments in the portfolio relative to other funds. For the three-, five- and ten-year periods, the portfolio ranks 42nd, 55th, & 55th percentile, respectively.
- **Longer term performance is mostly attributable to the Internally Managed F2 portfolio and the Fund's investment in zero coupon bonds in the 1980s, as well as prior investment managers.**
 - On average, F2 has been approximately 45% of the Fund's allocation to fixed income historically.
- **ASRS has made several changes to the structure of the Fixed Income asset class over the past year.**
 - Shifted assets away from Core Plus strategies to separate Core and High Yield strategies to better enable the ASRS to take advantage of opportunities in the below investment grade credit market.
 - Two Core Plus managers, BlackRock and Pyramis, were terminated
 - Two Core managers, PIMCO and Segall, Bryant & Hamill, were hired during 4Q09
 - Two High Yield managers, Columbia (formerly RiverSource) and Shenkman, were hired during 3Q09
 - Columbia and Shenkman have underperformed the Barclays Capital High Yield Index since inception primarily due to an underweight in riskier, distressed credits which substantially outperformed as the high yield market rallied. However, it is too early to meaningfully measure the performance of these managers
- **Funded four new Opportunistic managers to invest in select areas of the fixed income markets offering attractive opportunities including structured credit, bank loans, distressed debt and rescue financing.**
- **Funded a passive TIPS mandate during 1Q10**
- **Modestly increased the ASRS's passive holdings in U.S. Treasuries and agency MBS and reduced exposure to investment grade credit over the past several months in response to economic uncertainty. ASRS also selectively defunded an Opportunistic investment manager focused on non-agency RMBS and CMBS following recent rapid price appreciation in these sectors.**

¹Inception date of the ASRS Fixed Income Composite is June 30, 1975. Performance shown since December 31, 1975 because the Barclays Capital U.S. Aggregate Bond Index began reporting performance January 1, 1976..

Fixed Income Manager Reviews (Individual)

Note: All of the data in this report is as of June 30, 2010, unless otherwise noted.

Segall Bryant & Hamill

Qualitative Analysis

Factors	Description
People	<ul style="list-style-type: none"> • SBH manages fixed income portfolios using a team approach. • The Investment Committee includes experienced members of all SBH investment teams – equity, fixed income and alternative investments. The Committee is lead by the Chief Investment Officer and is responsible for the structural framework (yield curve, credit quality and sector weightings) of the initial top-down analysis. • Following the framework established by the Committee, the Fixed Income Group then employs a bottom-up approach to find relative value within individual sectors. • The Fixed Income Group is comprised of two portfolio managers who have worked together in excess of ten years and four research analysts.
Philosophy	<ul style="list-style-type: none"> • SBH focuses exclusively on managing investment grade fixed income portfolios and believes that superior risk-adjusted returns can be achieved by employing a disciplined investment process that incorporates both top-down and bottom-up analysis and focuses on long-term relative value. • SBH does not rely on systematic/structural overweighting of any one sector, such as mortgages, to provide performance. Rather, they look for relative value across multiple sectors. • Security selection is consistently the greatest influence on returns relative to the benchmark.
Process	<ul style="list-style-type: none"> • Roughly 80% of research used is generated internally with the remainder coming from external sources. • Members of the Fixed Income Group perform security-specific due diligence in order to identify value and minimize risk. • One area where SBH adds value is by investing in high quality, smaller issues in the corporate market. These include securities that are part of relatively smaller deals, (as is the case in high quality corporate bond issues of \$500 million or less), and high quality companies with relatively small amount of public debt issued. Another area SBH adds value is in the Taxable Municipal Bond Market. • Portfolios are well diversified by sector and security. Positions in non-government issuers are limited to a maximum of 5%. SBH will typically limit investment in credit issuers to 1% of the portfolio or less. • To monitor and control risk, all portfolios are reviewed using CMS BondEdge, Portia, and proprietary models to monitor individual security exposure, industry concentrations, and interest rate sensitivity. In addition, individual securities and portfolios are stress-tested to evaluate expected returns under various interest rate and spread movement scenarios.

Segall Bryant & Hamill

Segall Bryant & Hamill vs. Barclays Capital U.S. Aggregate Excess Returns Since Inception¹ (December 1994) – June 30, 2010

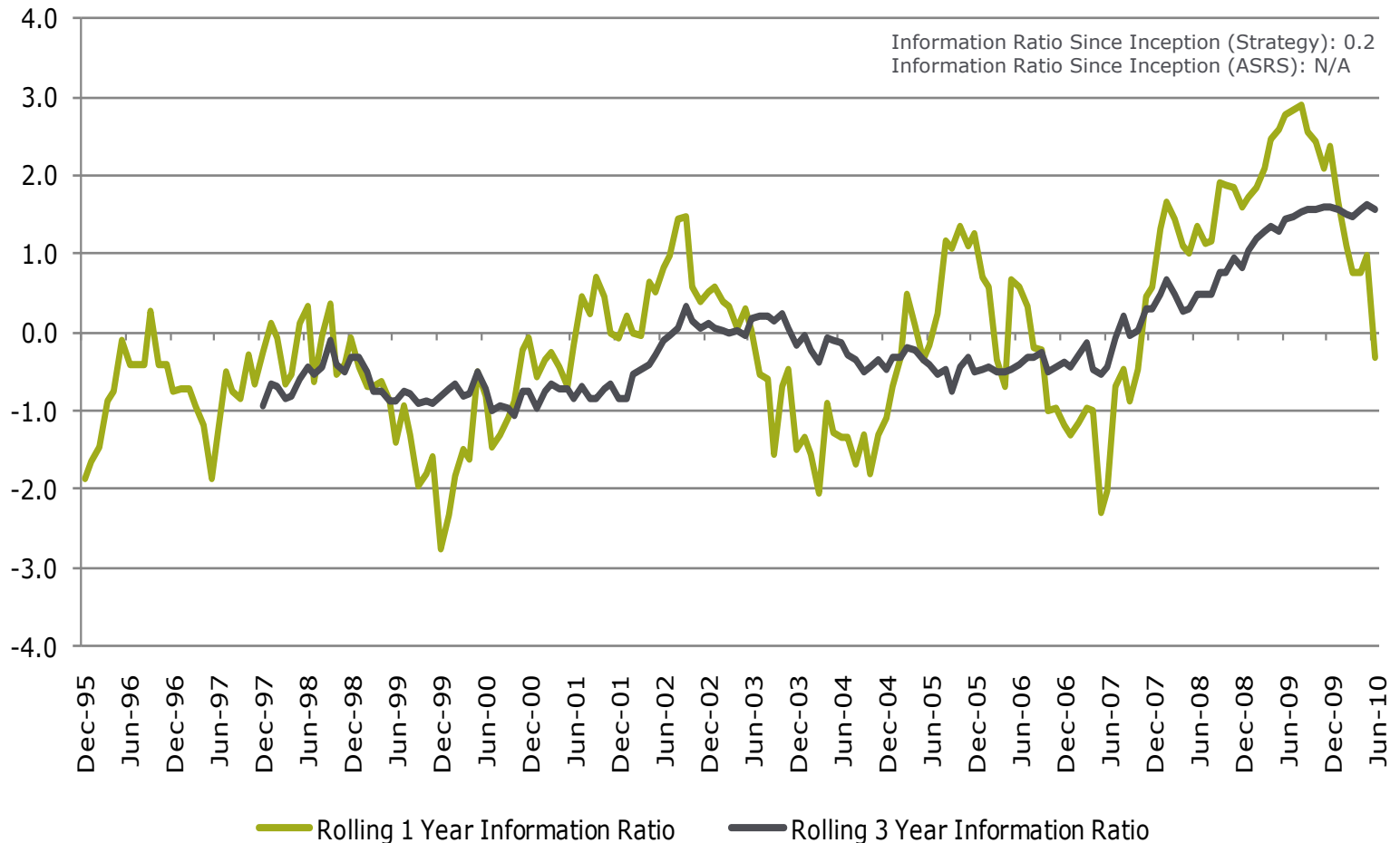


¹Net of fee performance of the Segall Bryant & Hamill Core Fixed Income Composite was linked with ASRS portfolio performance. Composite data provided by eVestment Alliance. Inception date of the ASRS portfolio is December 31, 2009.

Note: Based on monthly, net of fee performance data, since inception.

Segall Bryant & Hamill

Segall Bryant & Hamill vs. Barclays Capital U.S. Aggregate Information Ratios Since Inception¹ (December 1994) – June 30, 2010

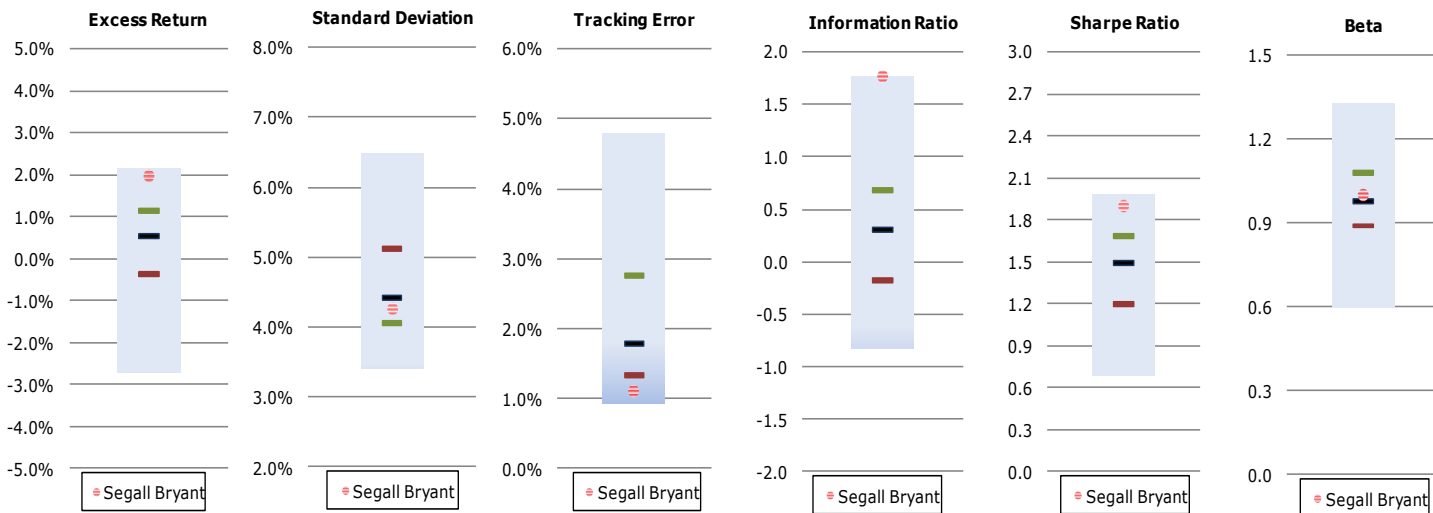


¹Net of fee performance of the Segall Bryant & Hamill Core Fixed Income Composite was linked with ASRS portfolio performance. Composite data provided by eVestment Alliance. Inception date of the ASRS portfolio is December 31, 2009.

Note: Based on monthly, net of fee performance data, since inception.

Segall Bryant & Hamill

Segall Bryant & Hamill vs. Barclays Capital U.S. Aggregate Risk and Return Characteristics vs. Core Fixed Income Universe For the three-year period ending June 30, 2010¹



	Excess Return	Standard Deviation	Tracking Error	Information Ratio	Sharpe Ratio	Beta
Segall Bryant	2.0%	4.3%	1.1%	1.8	1.9	1.0
Rank	7	40	87	1	9	42
5th Percentile	2.2%	3.4%	4.8%	1.4	2.0	1.3
Upper Quartile	1.1%	4.1%	2.8%	0.7	1.7	1.1
Median	0.5%	4.4%	1.8%	0.3	1.5	1.0
Lower Quartile	-0.4%	5.1%	1.3%	-0.2	1.2	0.9
95th Percentile	-2.7%	6.5%	0.9%	-0.8	0.7	0.6
Observations	257	257	257	257	257	257

¹Gross of fee performance of the Segall Bryant & Hamill Core Fixed Income Composite was linked with ASRS portfolio performance. Composite data provided by eVestment Alliance. Inception date of the ASRS portfolio is December 31, 2009.

Note: Based on monthly, gross of fee performance data, since inception. Universe rankings are against the eVestment Alliance universe of managers as of June 30, 2010.

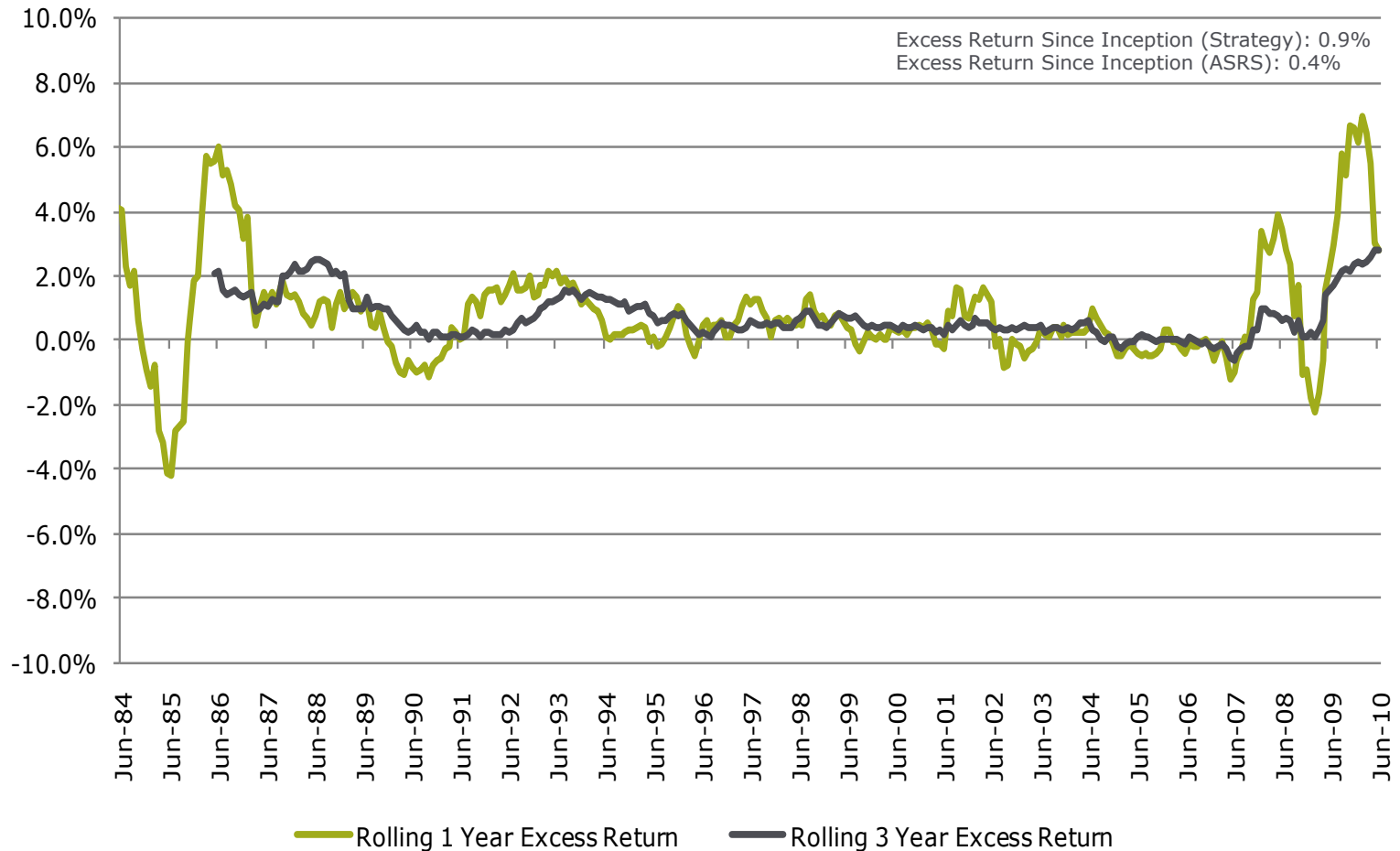
Pacific Investment Management Company LLC (PIMCO)

Qualitative Analysis

Factors	Description
People	<ul style="list-style-type: none"> ▪ PIMCO employ 459 investment professionals. ▪ PIMCO's decision making process at all levels (business, macro-economic forecasting, portfolio strategy, etc.) works on a consensus approach, so one individual's departure is not critical to the on-going operation of the firm. ▪ As it relates to the retirement of key PIMCO professionals, succession planning is handled months, sometimes even years, leading up to the retirement. Each year, every Managing Director provides the CEO with a list of potential successors, both in the event of an immediate emergency and for longer-term development. ▪ PIMCO has great depth in senior management with 39 Managing Directors, 70 Executive Vice Presidents, and 133 Senior Vice Presidents, giving the firm a breadth of talent from which to draw. In addition, PIMCO's size, growth and structure ensure that they are perpetually developing more seasoned professionals in both the client service and portfolio management groups.
Philosophy	<ul style="list-style-type: none"> • PIMCO's Total Return philosophy revolves around the principle of diversification. They believe that no single risk should dominate returns. By diversifying strategies, or relying on multiple sources of value, PIMCO is confident that they will be able to generate a solid track record with a high degree of consistency. • PIMCO's size gains their professionals access to corporations' top management, which is integral to the evaluation process. They meet with management as necessary to remain current on the financial and operating conditions of a company. PIMCO concentrates their efforts on companies that have strong underlying businesses, a strong competitive position within their industries, and financial flexibility. PIMCO focuses their investments in those issues that show improving credit profiles, the potential for upgrade by the rating agencies and, therefore, greater potential for capital appreciation.
Process	<ul style="list-style-type: none"> • PIMCO's investment process includes both top-down and bottom-up decision-making. The first and most important step in the process is to get the long run right. PIMCO believes analyzing secular economic and political influences is fundamental to sound portfolio decisions. Holding a definitive, long-term view helps guard against becoming caught up in periodic bouts of euphoria and depression that often characterize financial markets. PIMCO is much more optimistic about their skill in identifying long-run value through fundamental economic and credit analysis than their ability to time short-term market movements. • PIMCO considers secular analysis so important that they devote three-days each year to what is called the "Secular Forum," at which PIMCO formulates their outlook for global bond markets over the next three to five years. Selected members of the investment staff are assigned secular topics to monitor, including monetary and fiscal policy, inflation, demographics, technology, productivity trends, and global trade. At the Secular Forum, PIMCO's secular researchers summarize their findings for all of the firm's investment professionals. • PIMCO investment professionals meet quarterly in "Economic Forums" to evaluate growth and inflation over the business cycle horizon of the next 6-9 months. Presentations by four regional research teams covering North America, Europe, Asia and the Emerging Markets, offer a foundation for intensive evaluation by their investment professionals. • PIMCO's portfolio management group, through the incorporation of the Investment Committee's model portfolio characteristics, will then construct individual portfolios. The structure of this group resembles a hub and spoke system, with senior generalist portfolio managers comprising the hub and a group of sector specialists the spokes.

Pacific Investment Management Company LLC (PIMCO)

PIMCO vs. Barclays Capital U.S. Aggregate Excess Returns Since Inception¹ (June 1983) – June 30, 2010

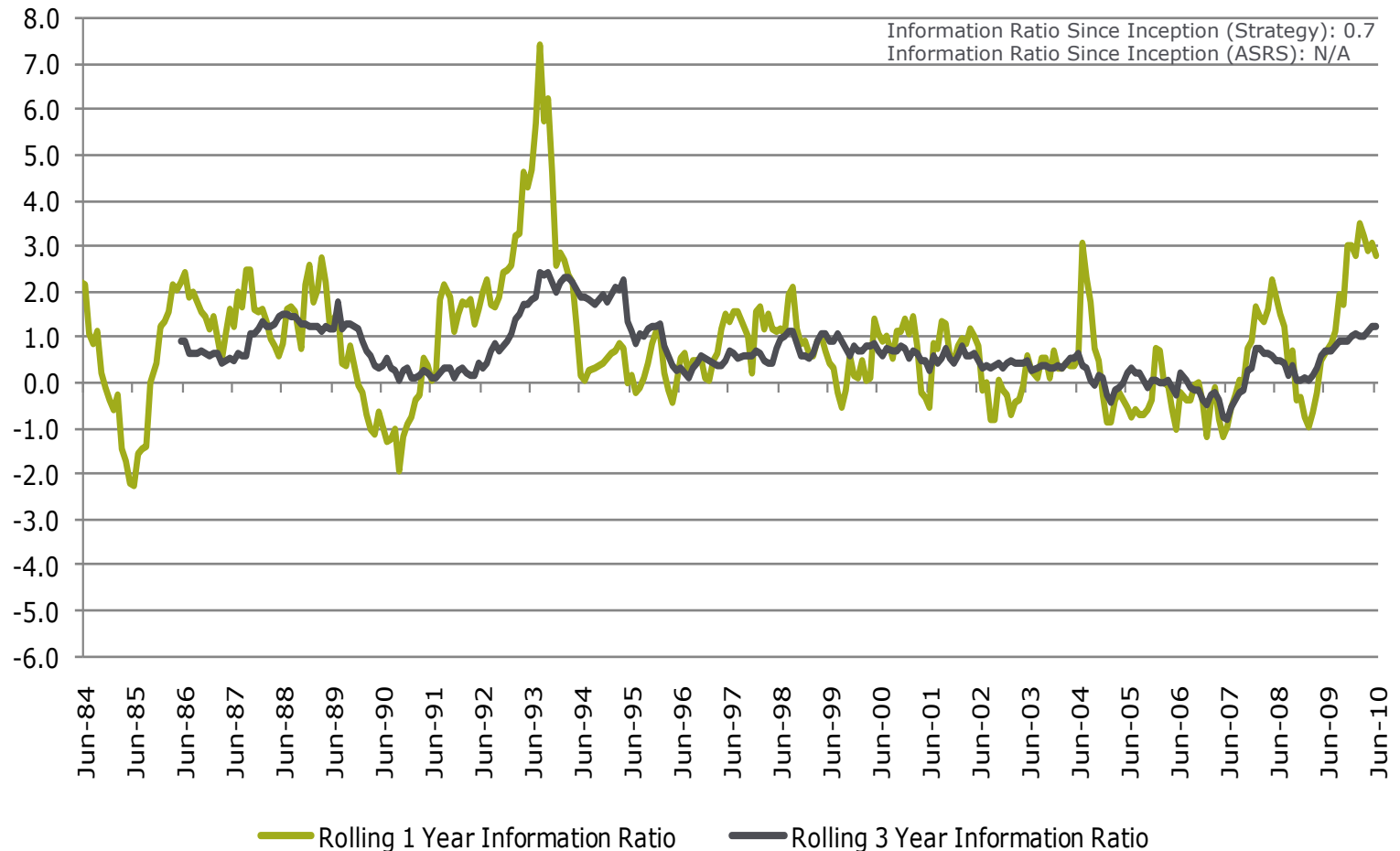


¹Net of fee performance of the PIMCO Core Fixed Income - Total Return Composite was linked with ASRS portfolio performance. Composite data provided by eVestment Alliance. Inception date of the ASRS portfolio is January 31, 2010.

Note: Based on monthly, net of fee performance data, since inception.

Pacific Investment Management Company LLC (PIMCO)

PIMCO vs. Barclays Capital U.S. Aggregate Information Ratios Since Inception¹ (June 1983) – June 30, 2010

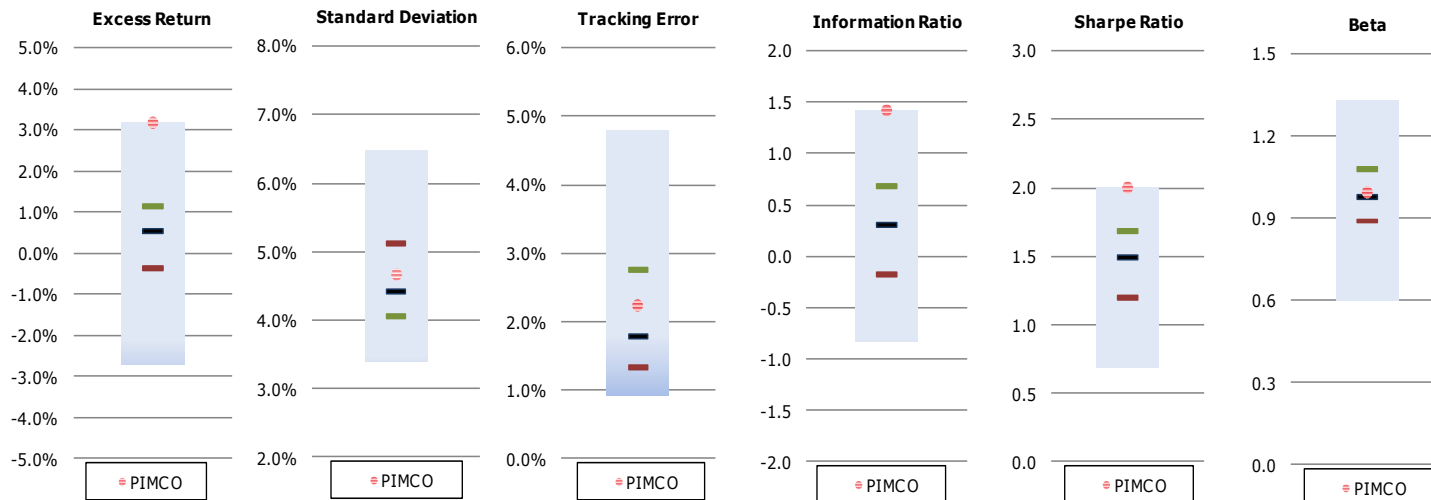


¹Net of fee performance of the PIMCO Core Fixed Income - Total Return Composite was linked with ASRS portfolio performance. Composite data provided by eVestment Alliance. Inception date of the ASRS portfolio is January 31, 2010.

Note: Based on monthly, net of fee performance data, since inception.

Pacific Investment Management Company LLC (PIMCO)

PIMCO vs. Barclays Capital U.S. Aggregate Risk and Return Characteristics vs. Core Fixed Income Universe For the three-year period ending June 30, 2010¹



	Excess Return	Standard Deviation	Tracking Error	Information Ratio	Sharpe Ratio	Beta
PIMCO	3.2%	4.7%	2.2%	1.4	2.0	1.0
Rank	1	60	35	4	4	45
5th Percentile	2.2%	3.4%	4.8%	1.4	2.0	1.3
Upper Quartile	1.1%	4.1%	2.8%	0.7	1.7	1.1
Median	0.5%	4.4%	1.8%	0.3	1.5	1.0
Lower Quartile	-0.4%	5.1%	1.3%	-0.2	1.2	0.9
95th Percentile	-2.7%	6.5%	0.9%	-0.8	0.7	0.6
Observations	257	257	257	257	257	257

¹Gross of fee performance of the PIMCO Core Fixed Income - Total Return Composite was linked with ASRS portfolio performance. Composite data provided by eVestment Alliance. Inception date of the ASRS portfolio is January 31, 2010.

Note: Based on monthly, gross of fee performance data, since inception. Universe rankings are against the eVestment Alliance universe of managers as of June 30, 2010.

Columbia Management Investment Advisors, LLC

Qualitative Analysis

Factors	Description
People	<ul style="list-style-type: none">• The decision-making process for the RiverSource Institutional High Yield Fixed Income strategy is driven and shaped by the High Yield Sector Team.• The team, led by a Portfolio Manager, includes six sector managers and two portfolio analysts and is responsible for investment strategy, asset allocation, portfolio construction, security selection, and trading. The management team has significant depth and continuity, averaging 19 years of firm tenure and 21 years of industry experience.• The High Yield Sector Team partners with the Fixed Income Research Department, leveraging the knowledge and insight of 34 research professionals. The fixed income research effort employs a sector specialist approach to establish an information advantage across a wide spectrum of market segments, with nine analysts who average 15 years of industry experience and one associate analyst dedicated to high yield research. Analysts cover approximately two to four industries and 50 issuers on average.
Philosophy	<ul style="list-style-type: none">• The High Yield team focuses on generating strong risk-adjusted returns, while actively managing downside risk consistent with client's objectives and constraints.• Credit selection is critical in high yield investing. The team devotes substantial resources to developing bottom-up fundamental research which typically contributes two-thirds of the alpha generated.• A key to performing in varying market environments is to effectively assess the outlook for financial and economic conditions. By adding a top down overlay approach to the process, the team finds that tactical management can typically contribute one-third of the alpha generated and even higher levels during extreme market conditions or "turns" in the credit cycle.• A constant focus on downside risk is required due to the asymmetrical risk profile of high yield. The approach to portfolio diversification, position size management, and a strong sell discipline are distinguishing features of the strategy's downside risk management capability.
Process	<ul style="list-style-type: none">• Analysts and Portfolio Managers work in partnership for idea generation, credit selection and setting investment strategy and positioning.• Credit selection is paramount, and driven by rigorous fundamental analysis and reviewed at the credit roundtable. Credits are monitored on a continuous basis relative to the price target and catalysts set by the analysts.• Relative value decisions are made to trade off risk and reward on the issuers they are investing in and to optimize portfolio positioning.• This approach results in a well diversified portfolio that helps manage downside risk.

Columbia Management Investment Advisors, LLC

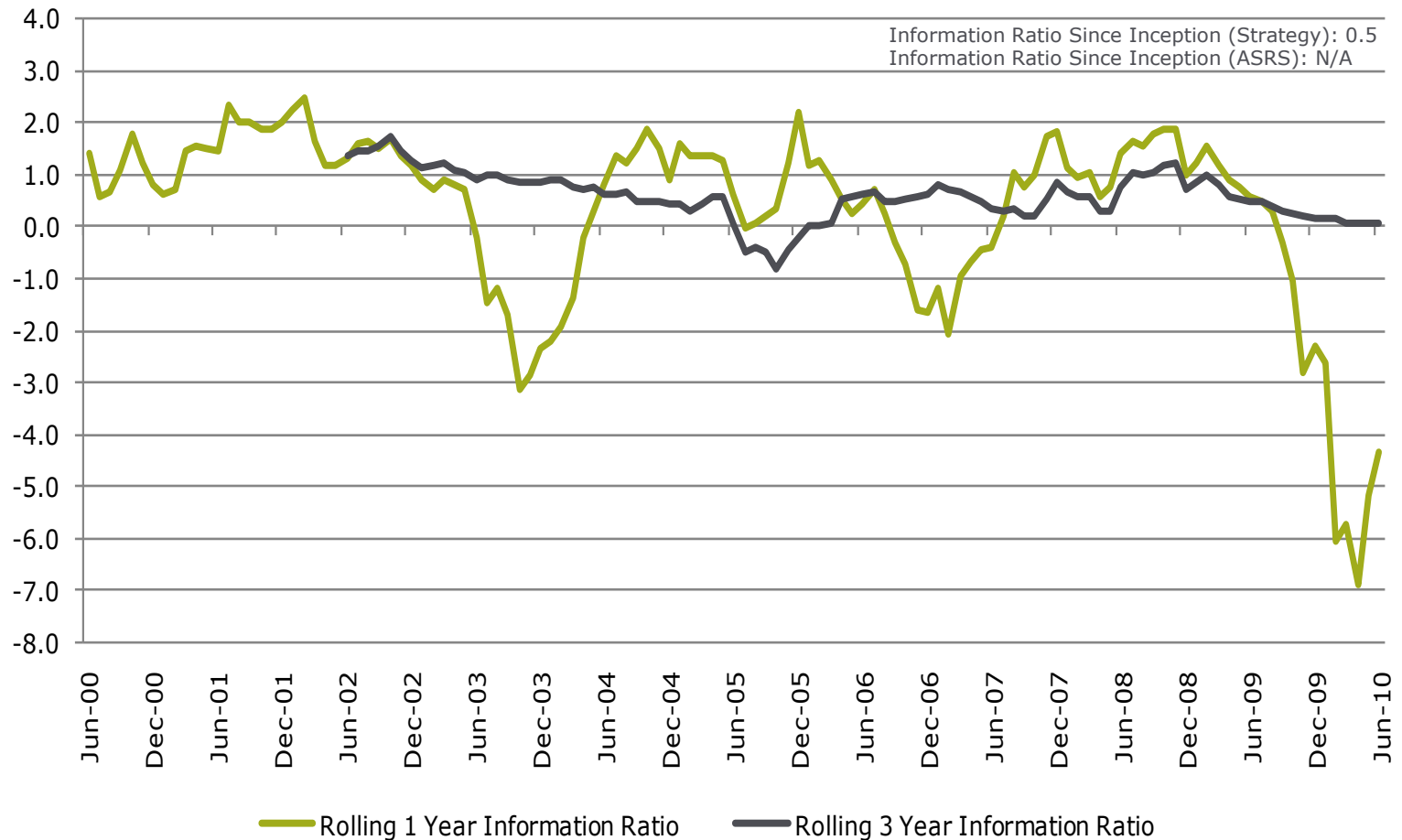
Columbia vs. Barclays Capital U.S. High Yield Excess Returns Since Inception¹ (June 1999) – June 30, 2010



¹Net of fee performance of the Columbia Management Investment Advisors, LLC - RiverSource Institutional High Yield Fixed Income Composite was linked with ASRS portfolio performance. Composite data provided by eVestment Alliance. Inception date of the ASRS portfolio is September 30, 2009.
Note: Based on monthly, net of fee performance data, since inception.

Columbia Management Investment Advisors, LLC

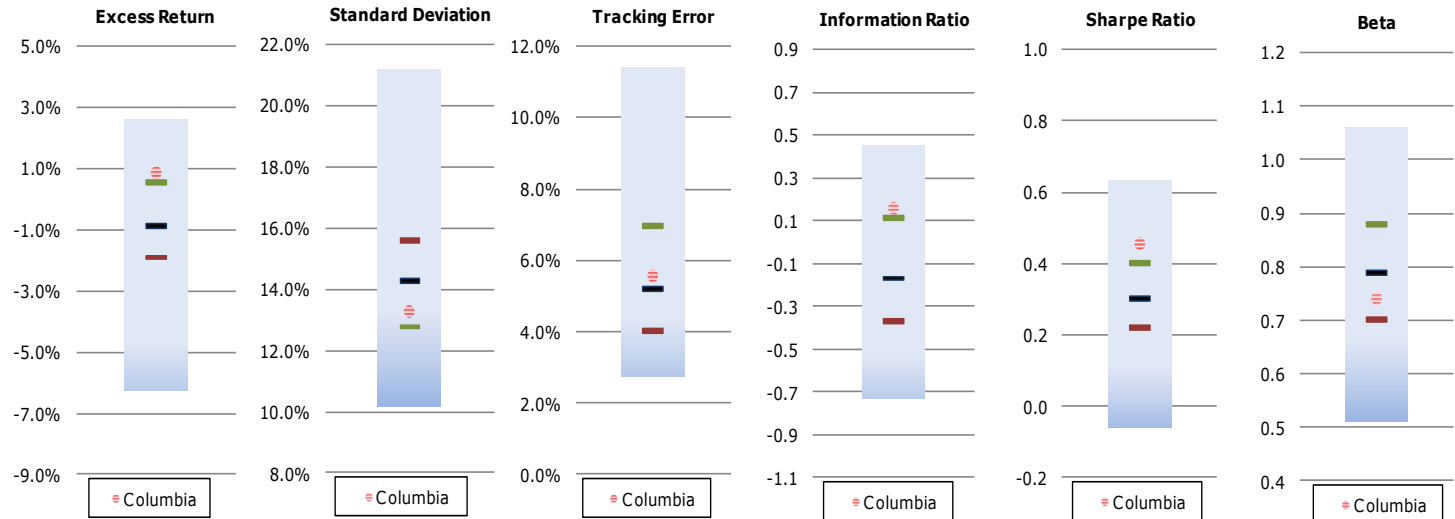
Columbia vs. Barclays Capital U.S. High Yield Information Ratios Since Inception¹ (June 1999) – June 30, 2010



¹Net of fee performance of the Columbia Management Investment Advisors, LLC - RiverSource Institutional High Yield Fixed Income Composite was linked with ASRS portfolio performance. Composite data provided by eVestment Alliance. Inception date of the ASRS portfolio is September 30, 2009.
Note: Based on monthly, net of fee performance data, since inception.

Columbia Management Investment Advisors, LLC

Columbia vs. Barclays Capital U.S. High Yield Risk and Return Characteristics vs. High Yield Fixed Income Universe For the three-year period ending June 30, 2010¹



	Excess Return	Standard Deviation	Tracking Error	Information Ratio	Sharpe Ratio	Beta
Columbia	0.9%	13.3%	5.6%	0.2	0.5	0.7
Rank	19	31	45	21	17	68
5th Percentile	2.6%	10.2%	11.4%	0.5	0.6	1.1
Upper Quartile	0.5%	12.8%	6.9%	0.1	0.4	0.9
Median	-0.9%	14.3%	5.2%	-0.2	0.3	0.8
Lower Quartile	-1.9%	15.6%	4.0%	-0.4	0.2	0.7
95th Percentile	-6.3%	21.2%	2.8%	-0.7	-0.1	0.5
Observations	143	143	143	143	143	143

¹Gross of fee performance of the Columbia Management Investment Advisors, LLC - RiverSource Institutional High Yield Fixed Income Composite was linked with ASRS portfolio performance. Composite data provided by eVestment Alliance. Inception date of the ASRS portfolio is September 30, 2009.

Note: Based on monthly, gross of fee performance data, since inception. Universe rankings are against the eVestment Alliance universe of managers as of June 30, 2010.

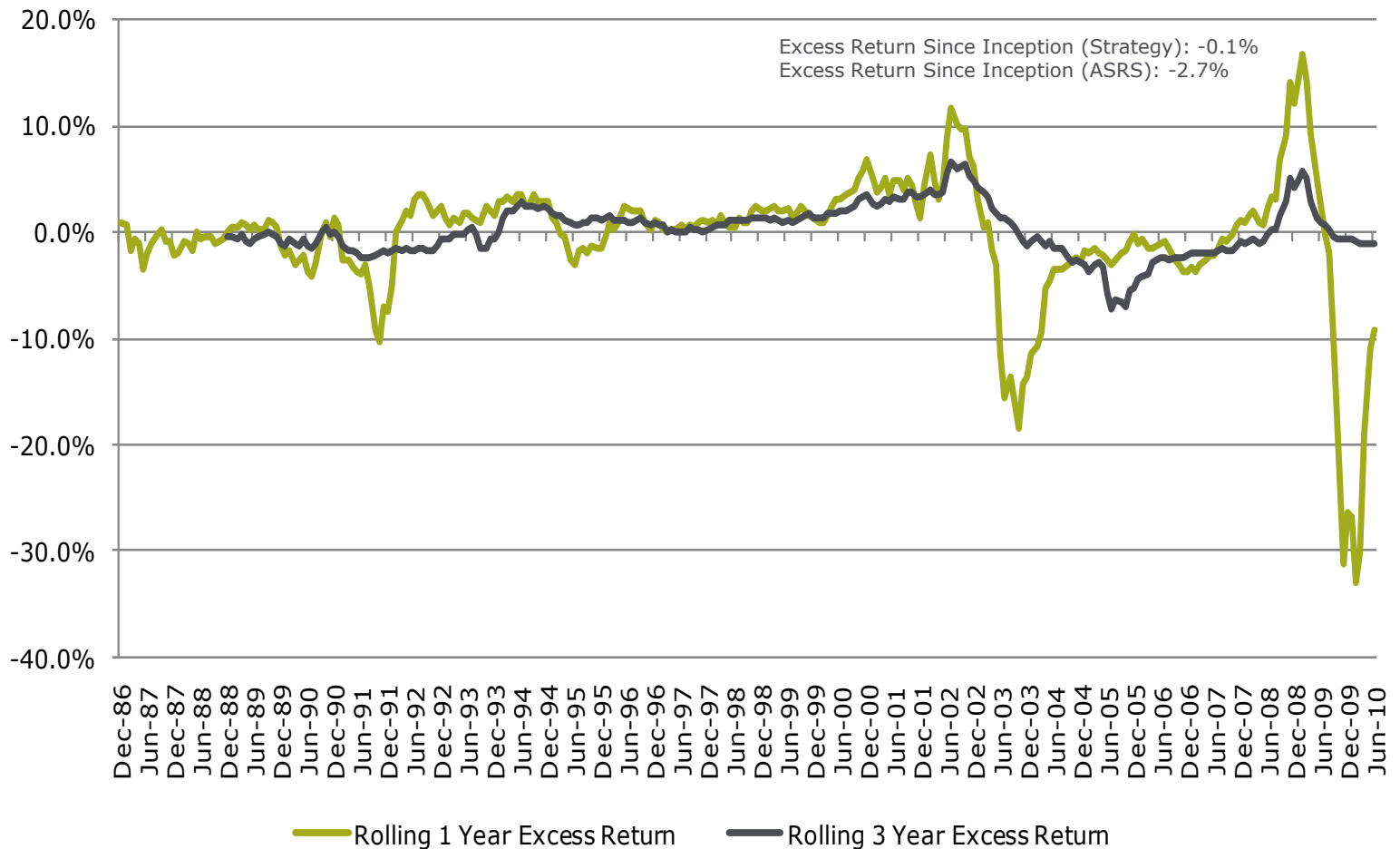
Shenkman Capital Management, Inc.

Qualitative Analysis

Factors	Description
People	<ul style="list-style-type: none"> • 80 team members all dedicated to the management of leveraged companies. • Focused solely on one style and one asset class - leveraged finance. • Independently owned by nine senior managers and one outside director; people who manage the assets are owners of the firm. • Profits are invested back in the company - no competing businesses, broker-dealer affiliates, or major financial services company bureaucracy. • Team consists of 30 investment professionals and 50 support staff; with a client to team member ratio of 2:1. • A collegial environment with low professional turnover; over 18 years under the same senior portfolio managers. • 25 years experience in multiple bull and bear markets.
Philosophy	<ul style="list-style-type: none"> • Conservative, defensive, prudent (No Style Drift). • Objective is to preserve clients' capital and provide superior risk-adjusted returns over full credit cycles. • "Have the fewest credit mistakes" is the primary goal; find companies with improving credit fundamentals that will pay interest to investors on time. • Outperformance in difficult and uncertain markets. • Culture of compliance with tight risk controls.
Process	<ul style="list-style-type: none"> • Structured and disciplined bottom-up fundamental research process. • Intensive credit research utilizing internally developed proprietary tools; Credit Score Matrix (C. Scope®) replacing the rating agencies. • Process driven, rules based credit decisions that do not deviate in any market conditions. • In-depth financial models and cash flow analysis. • Innovator of credit risk analysis with low default rate. • Mandatory management contact meetings (4x's a year per credit). • Transparent and open communications with clients; our firm becomes our clients' high yield department. • Clients have access to our entire professional team.

Shenkman Capital Management, Inc.

Shenkman vs. Barclays Capital U.S. High Yield Excess Returns Since Inception¹ (December 1985) – June 30, 2010

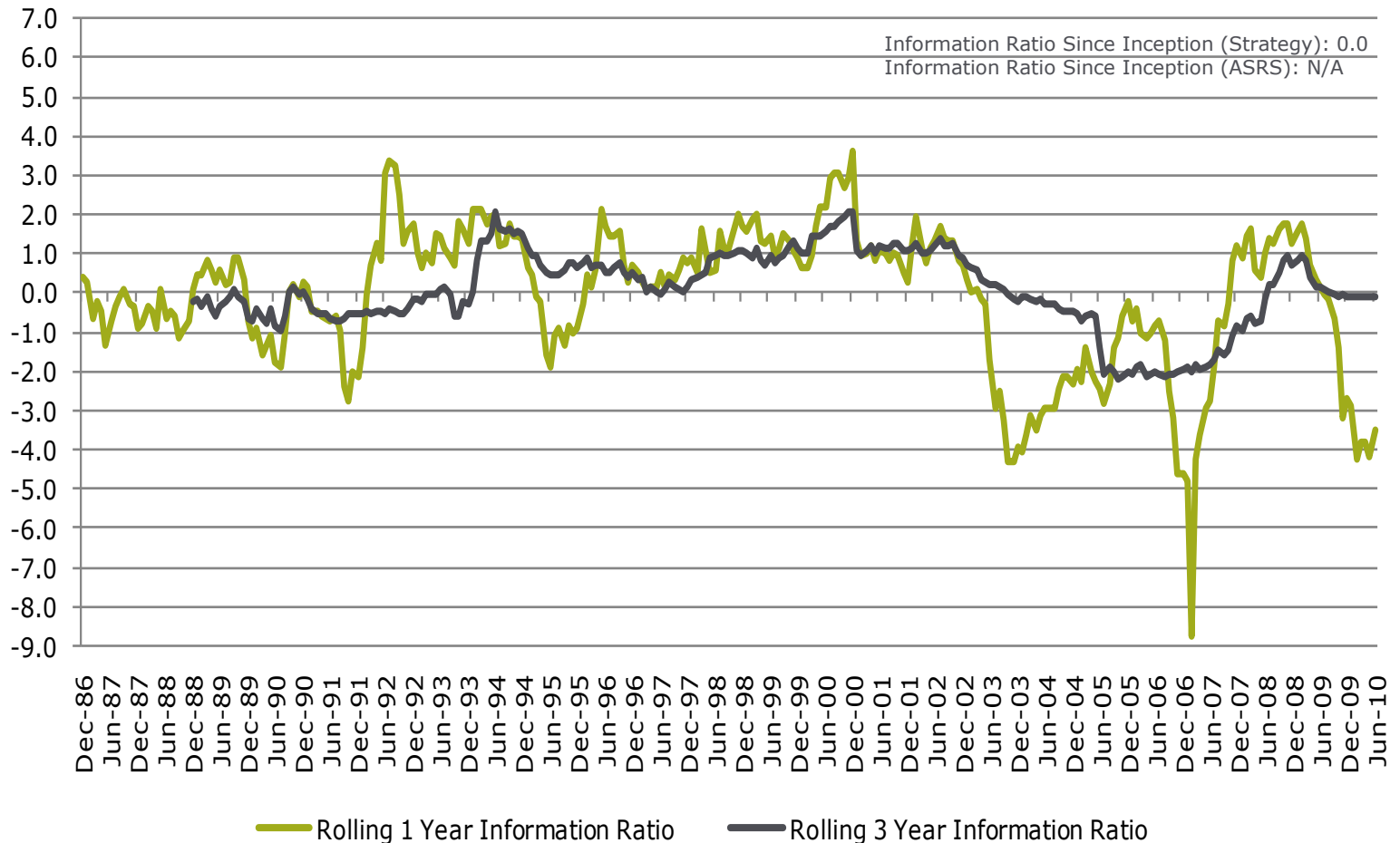


¹Net of fee performance of the Shenkman Capital High Yield Bond Strategy Composite was linked with ASRS portfolio performance. Composite data provided by eVestment Alliance. Inception date of the ASRS portfolio is September 30, 2009.

Note: Based on monthly, net of fee performance data, since inception.

Shenkman Capital Management, Inc.

Shenkman vs. Barclays Capital U.S. High Yield Information Ratios Since Inception¹ (December 1985) – June 30, 2010

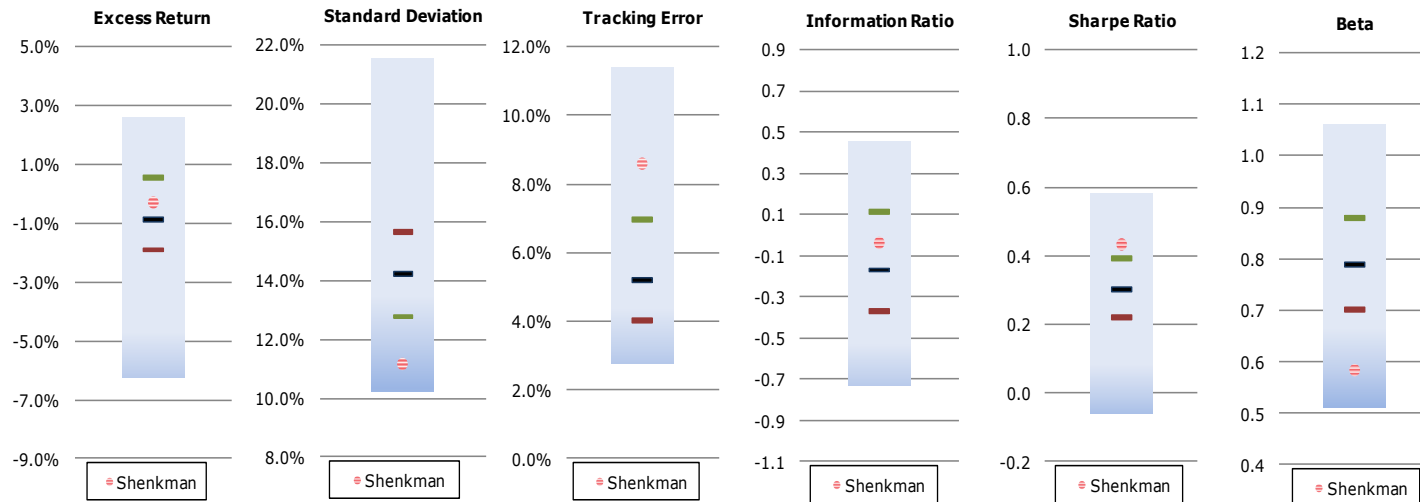


¹Net of fee performance of the Shenkman Capital High Yield Bond Strategy Composite was linked with ASRS portfolio performance. Composite data provided by eVestment Alliance. Inception date of the ASRS portfolio is September 30, 2009.

Note: Based on monthly, net of fee performance data, since inception.

Shenkman Capital Management, Inc.

Shenkman vs. Barclays Capital U.S. High Yield Risk and Return Characteristics vs. High Yield Fixed Income Universe For the three-year period ending June 30, 2010¹



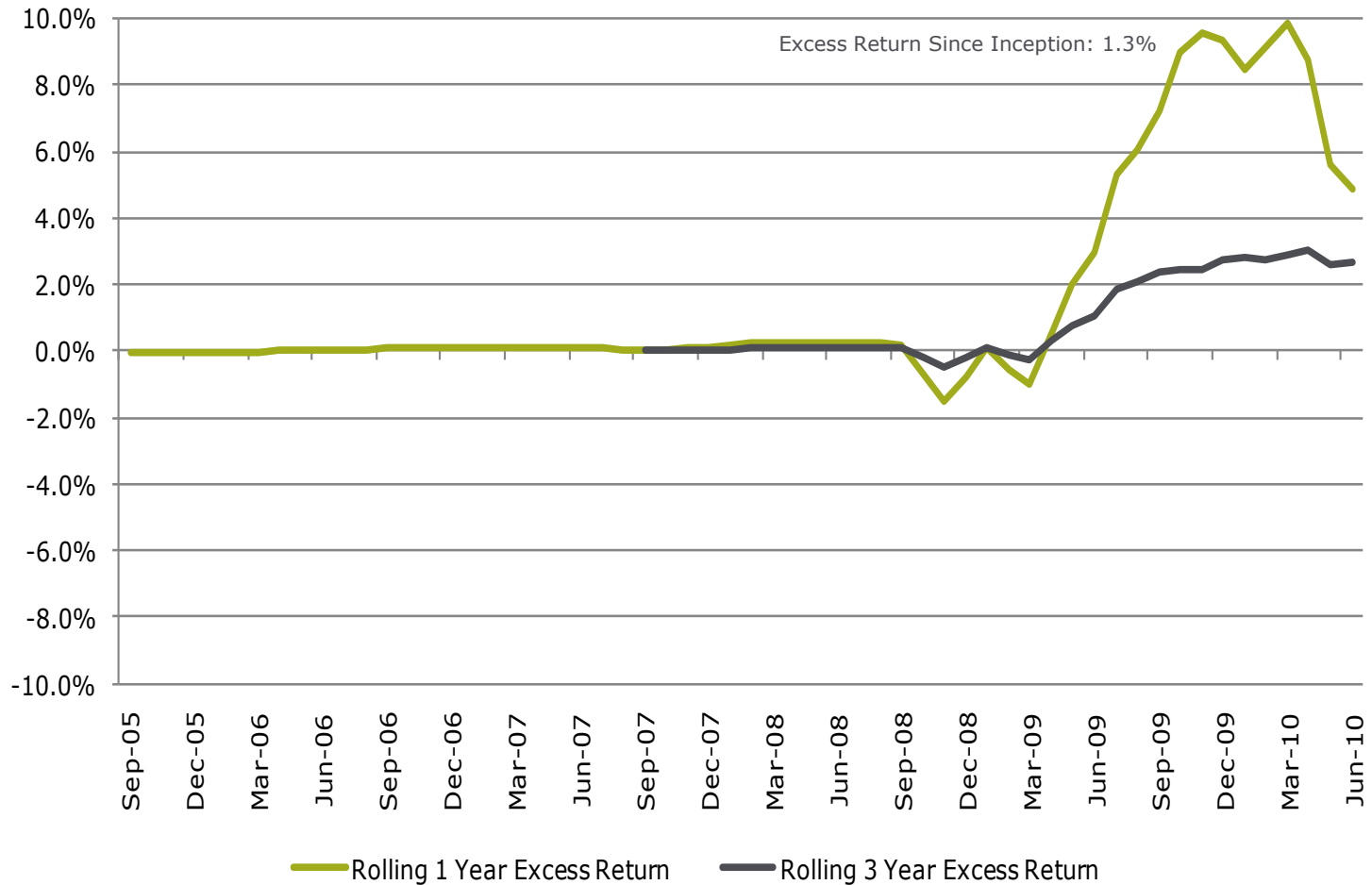
	Excess Return	Standard Deviation	Tracking Error	Information Ratio	Sharpe Ratio	Beta
Shenkman	-0.3%	11.2%	8.6%	0.0	0.4	0.6
Rank	37	9	15	34	20	91
5th Percentile	2.6%	10.2%	11.4%	0.5	0.6	1.1
Upper Quartile	0.5%	12.8%	6.9%	0.1	0.4	0.9
Median	-0.9%	14.2%	5.2%	-0.2	0.3	0.8
Lower Quartile	-1.9%	15.6%	4.0%	-0.4	0.2	0.7
95th Percentile	-6.3%	21.6%	2.8%	-0.7	-0.1	0.5
Observations	143	143	143	143	143	143

¹Gross of fee performance of the Shenkman High Yield Bond Strategy Composite was linked with ASRS portfolio performance. Composite data provided by eVestment Alliance. Inception date of the ASRS portfolio is September 30, 2009.

Note: Based on monthly, gross of fee performance data, since inception. Universe rankings are against the eVestment Alliance universe of managers as of June 30, 2010.

BlackRock Institutional Trust Company

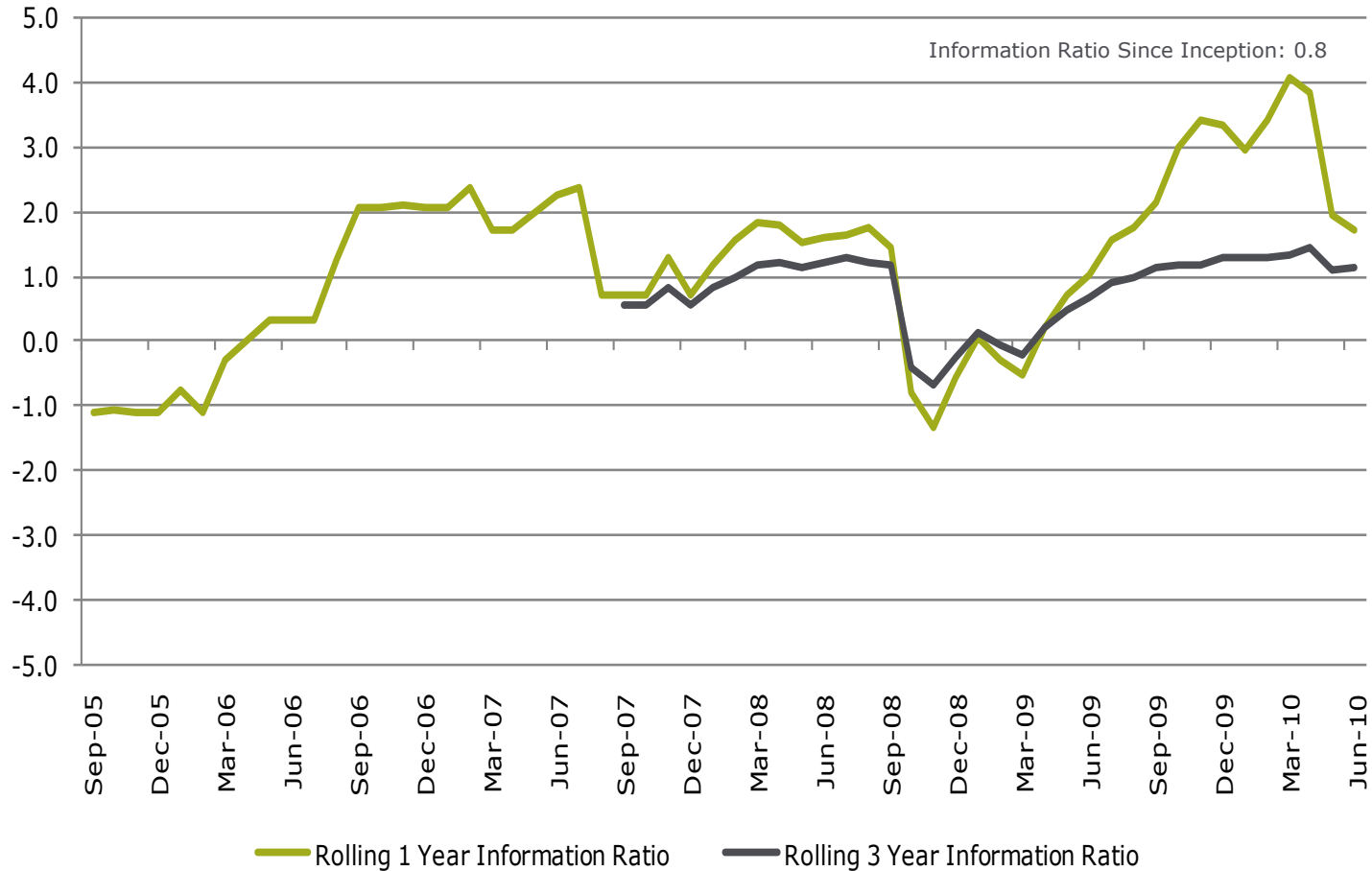
BlackRock vs. Barclays Capital U.S. Aggregate Excess Returns Since Inception (September 2004) – June 30, 2010



Note: Based on monthly, net of fee performance data, since inception.

BlackRock Institutional Trust Company

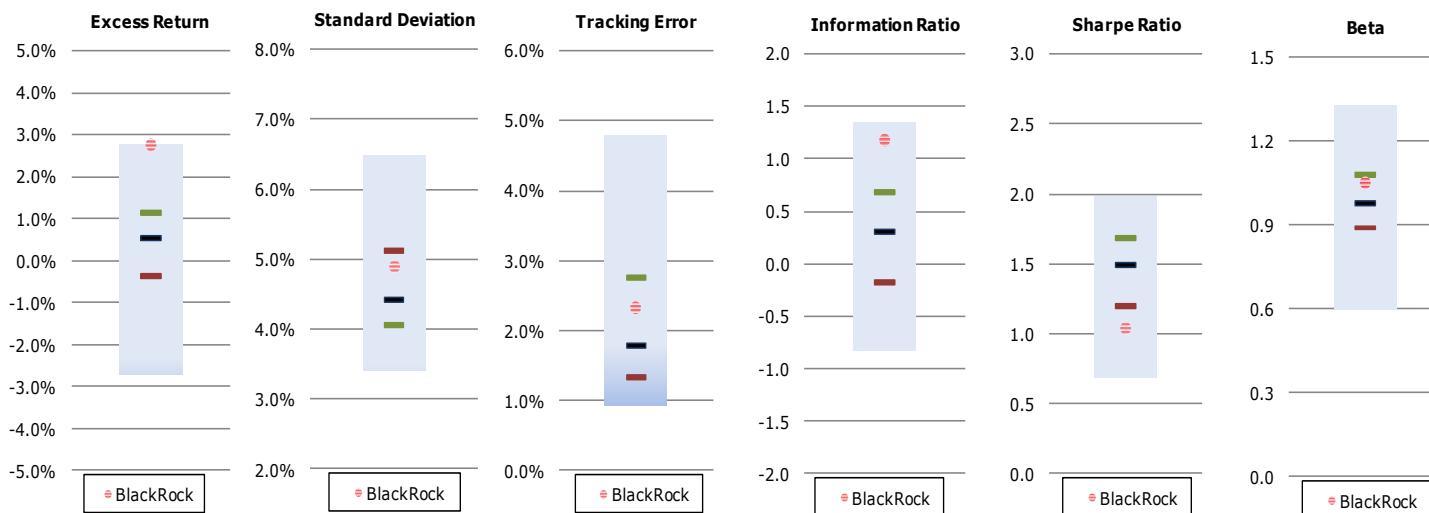
BlackRock vs. Barclays Capital U.S. Aggregate Information Ratios Since Inception (September 2004) – June 30, 2010



Note: Based on monthly, net of fee performance data, since inception.

BlackRock Institutional Trust Company

BlackRock vs. Barclays Capital U.S. Aggregate Risk and Return Characteristics vs. Core Fixed Income Universe For the three-year period ending June 30, 2010

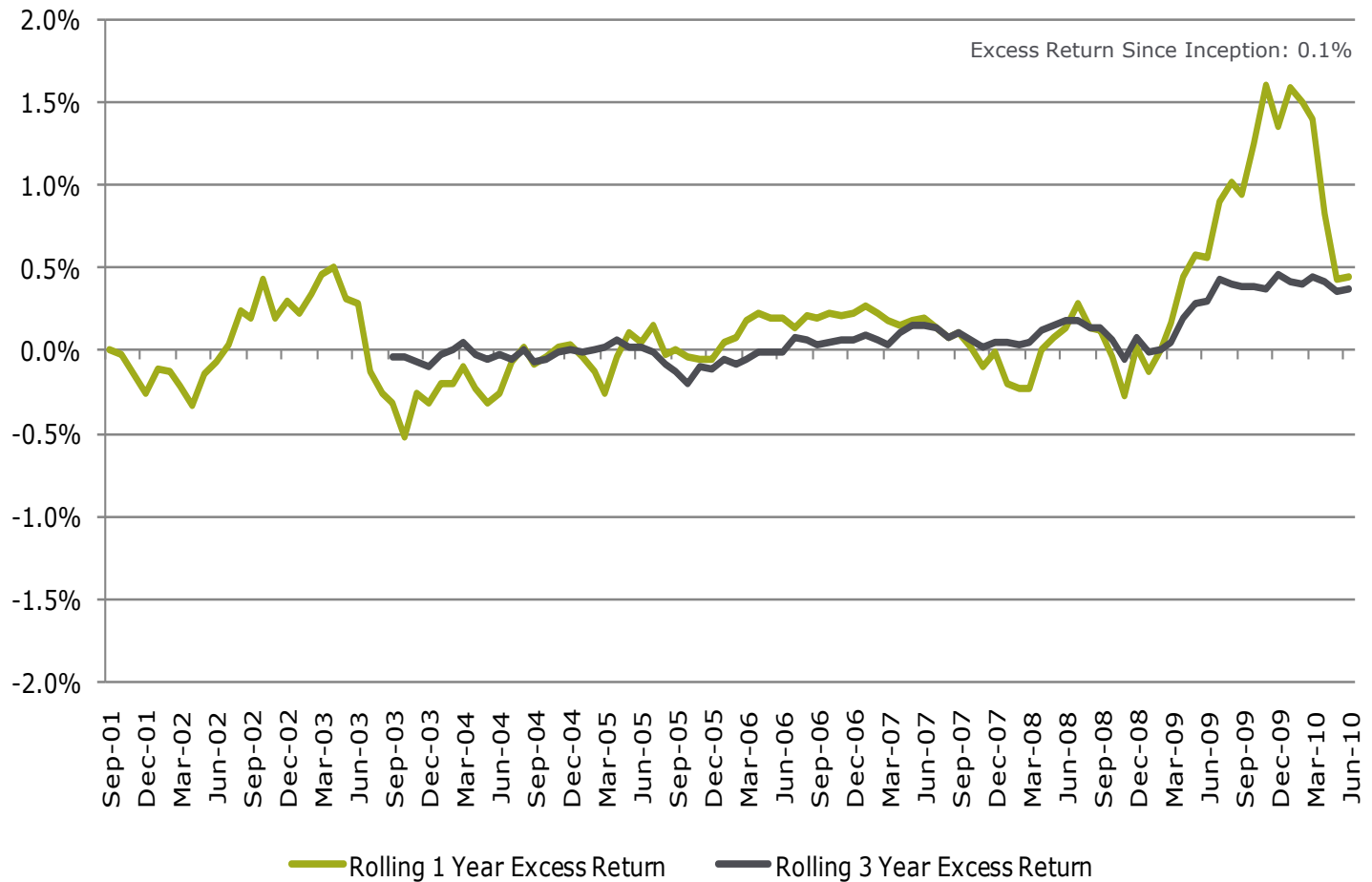


	Excess Return	Standard Deviation	Tracking Error	Information Ratio	Sharpe Ratio	Beta
BlackRock	2.8%	4.9%	2.3%	1.2	1.0	1.1
Rank	1	68	34	9	85	30
5th Percentile	2.2%	3.4%	4.8%	1.4	2.0	1.3
Upper Quartile	1.1%	4.1%	2.8%	0.7	1.7	1.1
Median	0.5%	4.4%	1.8%	0.3	1.5	1.0
Lower Quartile	-0.4%	5.1%	1.3%	-0.2	1.2	0.9
95th Percentile	-2.7%	6.5%	0.9%	-0.8	0.7	0.6
Observations	257	257	257	257	257	257

Note: Based on monthly, gross of fee performance data, since inception. Universe rankings are against the eVestment Alliance universe of managers as of June 30, 2010.

Internally Managed F2

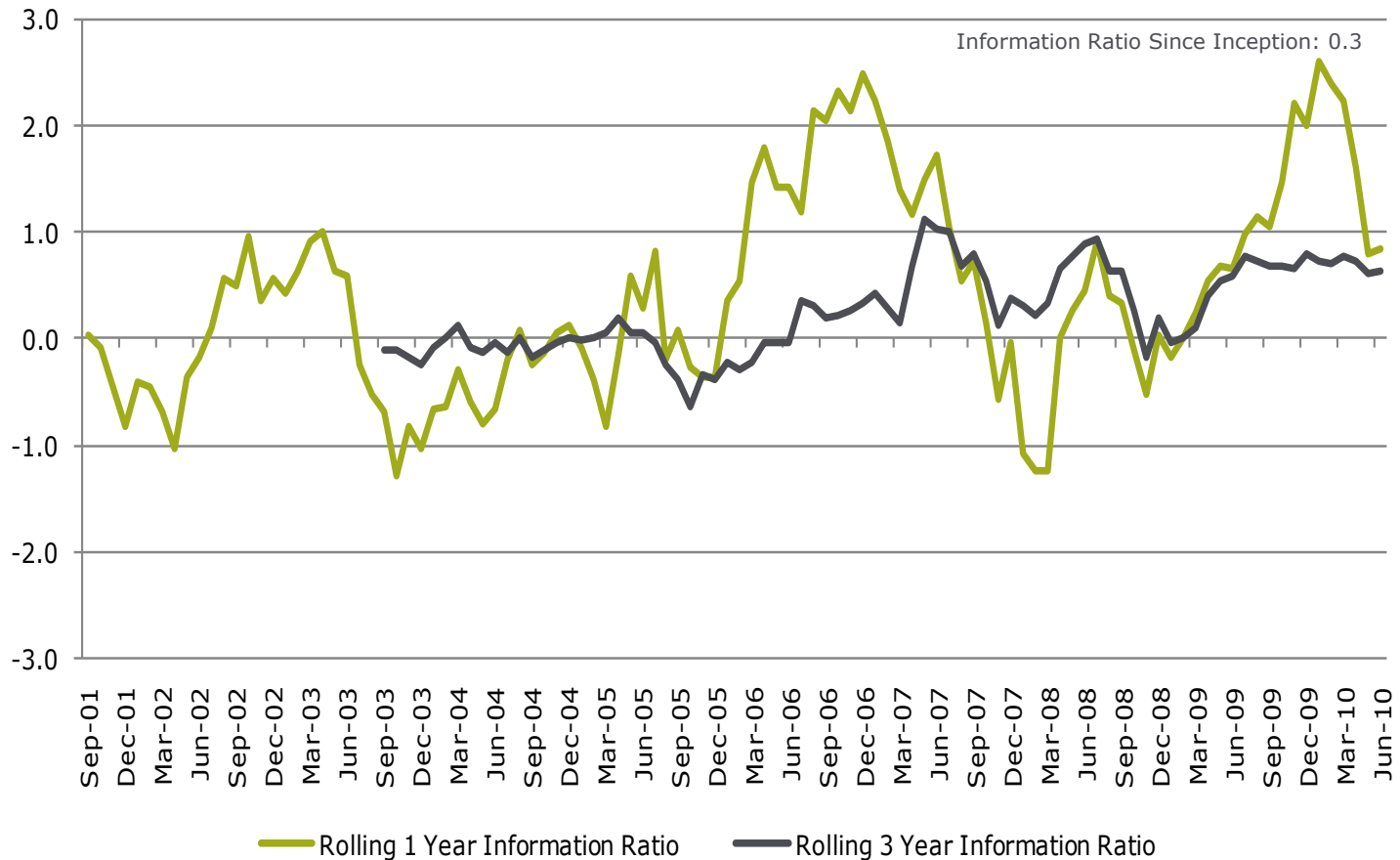
F2 vs. Barclays Capital U.S. Aggregate
Excess Returns Since Inception (September 2000) – June 30, 2010



Note: Based on monthly, net of fee performance data, since inception.

Internally Managed F2

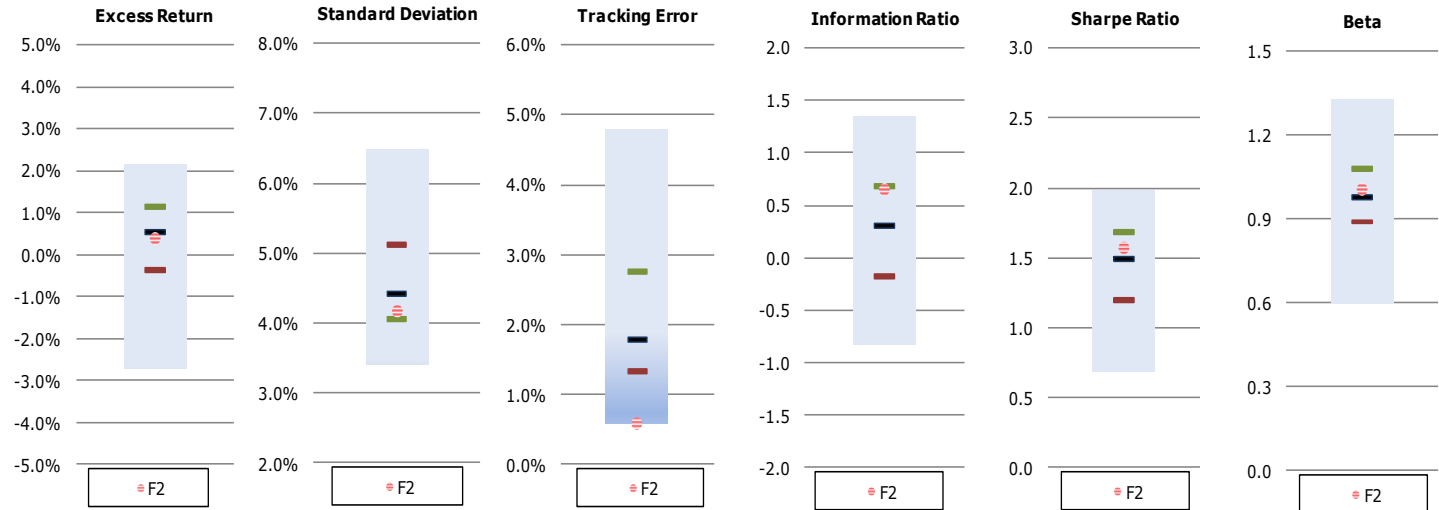
F2 vs. Barclays Capital U.S. Aggregate
Information Ratios Since Inception (September 2000) – June 30, 2010



Note: Based on monthly, net of fee performance data, since inception.

Internally Managed F2

F2 vs. Barclays Capital U.S. Aggregate Risk and Return Characteristics vs. Core Fixed Income Universe For the three-year period ending June 30, 2010



	Excess Return	Standard Deviation	Tracking Error	Information Ratio	Sharpe Ratio	Beta
F2	0.4%	4.2%	0.6%	0.7	1.6	1.0
Rank	57	32	99	28	40	42
5th Percentile	2.2%	3.4%	4.8%	1.4	2.0	1.3
Upper Quartile	1.1%	4.1%	2.8%	0.7	1.7	1.1
Median	0.5%	4.4%	1.8%	0.3	1.5	1.0
Lower Quartile	-0.4%	5.1%	1.3%	-0.2	1.2	0.9
95th Percentile	-2.7%	6.5%	0.9%	-0.8	0.7	0.6
Observations	257	257	257	257	257	257

Note: Based on monthly, gross of fee performance data, since inception. Universe rankings are against the eVestment Alliance universe of managers as of June 30, 2010.

Information Disclosure

- **These materials contain summary information regarding the investment management approaches described herein and are not a complete description of the investment objectives, policies, guidelines or portfolio management and research that supports these approaches. This analysis does not constitute a recommendation to implement any of the aforementioned approaches. The information has been obtained from sources NEPC believes to be reliable, but we cannot guarantee its accuracy or completeness.**
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